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Northamptonshire County Council.

THIRTIETH

Annual Report

OF THE

Medical Officer of Health

FOR THE YEAR 1926,

BY

L. MEREDITH DAVIES

County Medical Officer of Health,

KETTERING :
T. BEATY HART, LTD., BRIDEWELL PRINTING WORKS, GREEN LANE
1927

BRITISH MUSEUM
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Northamptonshire County Council.

THIRTIETH
ANNUAL REPORT
OF THE
Medical Officer of Health
FOR THE YEAR 1926.

To the Chairman and members of the Northamptonshire County Council.

My Lords, Mr. Chairman, Miss Cartwright, and Gentlemen,

I HAVE the honour to submit the Thirtieth Annual Report on the Public Health of the County of Northampton.

I took over the duties of County Medical Officer of Health from my predecessor on the 1st April, 1926.

It is fitting through the medium of this Report to refer to the invaluable pioneer work done by Mr. Paget who was the first County Medical Officer of Health and served the County of Northampton from 1897 to 1926.

During the short time I have been in the County Mr. Paget has always been ready to advise and assist me with regard to various questions with which I was naturally unfamiliar. It is a cause of great satisfaction to me to know that Mr. Paget intends to remain in the County.

During the year, the Public Health Committee have had under consideration the co-ordination of the various health agencies of the County Council. I am glad to report that good progress has been made in the direction of amalgamation by which a great amount of overlapping may be avoided.

An attempt was made to co-ordinate the internal administration of the various branches of the Department, but this cannot be effected efficiently until the Public Health Offices are situated together in one building.

It is satisfactory to report that for the year under review the general death-rate and the infantile mortality rate are the lowest on record.

The County Council have installed two ultra-violet lamps for the treatment of lupus at the Tuberculosis Dispensary, Wellingborough. By the investment of a small sum of money the County Council have not only saved a great deal of expenditure but ensured the treatment of all known cases of lupus in the County. The attention of the County Council is specially drawn to the report of the work done at the Tuberculosis Dispensaries for which the Tuberculosis Officer has supplied me with interesting and valuable information.

The Public Health is a comparatively new service with various new duties continually being imposed on it, consequently, as one would expect, the expenditure is bound to increase if these duties are to be carried out properly. I wish, however, to remind the Council that the whole of the branches of the Public Health Department only involve an expenditure equivalent to less than 2d. in the pound from the rates.

I wish to express my thanks to the members of the Council for the consideration which they have shown me, and to the members of the staff for their loyal co-operation.

I have the honour to be
Your obedient servant,
L. MEREDITH DAVIES,
County Medical Officer of Health
and School Medical Officer.

June, 1927.

Members of the Public Health, Housing, Maternity and Child Welfare Committee.

The Chairman of the County Council.
The Vice-Chairman of the County Council.
Dr. S. E. Baxter.
Miss B. A. Cartwright.
T. N. Cave, Esq.
C. Cross, Esq.
A. E. Elkington, Esq.
Sir T. Fermor-Hesketh, Bart.
J. Loake, Esq.
O. Parker, Esq.
W. M. Plevins, Esq.
Dr. W. W. Robb (Chairman).
W. Saddington, Esq.
A. H. Sartoris, Esq.
W. T. Sears, Esq.
J. S. Thompson, Esq.
F. H. Thornton, Esq.
A. J. Walker, Esq.
P. Wallis, Esq.
J. B. Whitworth, Esq.
Col. H. Wickham.
S. York, Esq.

Co-opted Members of Maternity and Child Welfare Committee.

Mrs. Andrews.
Mrs. Britton.
Sir J. H. C. Crockett.
Mrs. Gawthropp. (Resigned April, 1927)
Mrs. Lewin.
J. Rippiner, Esq.
Mrs. M. G. Waller.
Mrs. Wentworth Watson.
Lady Ethel Wickham.

Special Sub-Committee as to Re-organisation and Co-ordination of Health Agencies.

The Chairman of the County Council.
The Vice-Chairman of the County Council.
Dr. S. E. Baxter.
Miss B. A. Cartwright.
J. Loake, Esq.
O. Parker, Esq.
Dr. W. W. Robb.
A. H. Sartoris, Esq.
F. H. Thornton, Esq.
Mrs. Wentworth Watson.
Lady Ethel Wickham.
S. York, Esq.

Standing Sub-Committee to deal with applications for the supply of milk to expectant and nursing mothers and young children; for extra nourishment to tuberculous persons; for fixing the amount of the fee to be recovered from the patient or person responsible in maternity cases where medical assistance is called in by the attending midwife, and the institution of proceedings in cases of the latter.

Miss B. A. Cartwright.
Mrs. Gawthropp.
(Resigned April, 1927)
Dr. W. W. Robb.
J. S. Thompson, Esq.
F. H. Thornton, Esq.
Mrs. M. G. Waller.
S. York, Esq.
Mrs. M. Lewin.
(from April, 1927).

Rushden House Sanatorium Sub-Committee.

Dr. S. E. Baxter.
C. Cross, Esq.
J. Loake, Esq.
W. M. Plevins, Esq.
Dr. W. W. Robb.
W. Saddington, Esq.
A. H. Sartoris, Esq.
W. T. Sears, Esq.
S. York, Esq.

Co-opted Member: Representative of Insurance Committee.
Dr. L. W. Dryland.

Venereal Diseases Propaganda Sub-Committee.

Dr. S. E. Baxter.
Dr. W. W. Robb.
F. H. Thornton, Esq.

Milk and Dairies (Consolidation) Act, 1915 Sub-Committee.

Dr. W. W. Robb.
W. T. Sears, Esq.
J. S. Thompson, Esq.
F. H. Thornton, Esq.
P. Wallis, Esq.

Staff of the Public Health Department.

County Medical Officer of Health.

C. E. Paget, M.R.C.S., L.R.C.P., D.P.H., retired March 31st, 1926.

L. Meredith Davies, M.A. (Oxon.), M.D., B.Ch. (Oxon.), D.P.H. (Oxon.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), commenced duties 1st April, 1926.

Tuberculosis Officer.

D. Dempster, M.C., M.B., D.P.H., resigned 13th February, 1926.

J. R. Caldwell, M.B., Ch.B., commenced duties 23rd April, 1926.

Tuberculosis Nurses.

Miss E. Dashwood.

Mrs. Emerton (née Jennings), resigned 12th May, 1926.

Miss J. Sherris, resigned 20th August, 1926.

Medical Superintendent of Rushden House Sanatorium.

J. H. Crane, M.B.E., B.A., M.D., Ch.B., B.A.O., D.P.H.

Matron.

Miss B. A. Allsop.

Inspectors of Food and Drugs.

Southern Division : F. Caulton (Chief Inspector).

Northern Division : A. E. Waller (Inspector).
T. A. McLaughlin (Additional Inspector), commenced, temporarily, 13th September, 1926. (Permanently, 1st April, 1927).

Lady Assistant Medical Officer of Health.

L. S. Greig, M.B., D.P.H.

Health Visiting Staff.

Miss A. E. Robinson. (Supt.)
Miss M. E. Whitehouse.
Miss F. M. Sharpe.
Miss S. L. Wilkins.
Miss M. Mulrean.
Miss M. H. Panton.
Miss S. J. Devers.
Miss V. M. Cummins. (resigned, 29th Sept., 1926).
Miss M. Britton. (deceased, 23rd Dec., 1926).
Mrs. H. M. Boville (temporary) (permanent from 1st Oct., 1926).
Miss C. K. Gudgin.
Miss M. H. Meadley. (commenced 9th Nov., 1926).
Miss V. M. Rayner (temporary 17th Jan., 1927).
Miss M. S. Hitchcock. (temporary 18th Jan., 1927).

Part-time Health Visitors.

One Assistant Superintendent of Northamptonshire Nursing Association and thirty District Nurses in the areas of Brackley, Market Harborough and Towcester.

Clerical Staff.

T. Mossey (Chief Clerk).
P. J. Chamberlain.
F. D. Chamberlain.
S. E. Bierton.
S. D. Lilley.
Mrs. A. Sturgess (née Monk).

CO-ORDINATION OF HEALTH SERVICES.

Office Accommodation. The branches of the Health Services are at present housed in different offices in the County Hall and in Guildhall Road. The result is that each branch has become a water-tight department, with the consequent lack of complete co-ordination and duplication of clerical work.

It is suggested that all branches of the Health Services be housed together in one building in which there will be one general office where all records will be kept and all correspondence dealt with.

The result will be that the School, Tuberculosis, Maternity and Child Welfare, Mental Deficiency and other records will be available for reference by any officer. Further, by this arrangement, the County Medical Officer of Health will be in touch with all branches of the work.

Under the existing system, where separate staffs are detailed for each branch of the work, it is inevitable that at times the staff of one branch may be overworked, while that of another branch may be comparatively slack. Under the suggested system it will be possible better to equalise the work. Further, the clerical staff will be dealing with different branches of the work of the Public Health Services, thereby increasing their all round knowledge and adding to the interest of their work.

MEDICAL. During recent years several new activities have been undertaken by the County Council and, as a result, various officers have been appointed to carry out the new duties ; this has resulted in specialization. While in large centres of population specialization is perhaps desirable, in rural areas it would appear to be far more effective for one officer to carry out all the duties of the Public Health Service in defined areas of the County.

By this arrangement overlapping will be obviated and there will be a saving of time, labour and money. Under a system of specialization one home is liable to be visited by three—possibly four—officers, whereas if the services are co-ordinated a visit from one officer alone would suffice.

The advantages of the amalgamation of the medical staffs can be summarised as follows :—

(1) A single Officer in each district will supervise the health of the children from pre-natal days at least until they leave School. At present this supervision is shared by two Officers.

(2) The number of Officers dealing with a given family, save for the special cases of Tuberculosis or eye defects, will be reduced to one.

(3) Even with the present staff of two Assistant School Medical Officers and one Assistant County Medical Officer for Maternity and Child Welfare it will be possible by combination to reduce the period between visits to Schools from 14 months to 12 months, while at the same time leaving a little time for enquiries into outbreaks of infectious disease affecting school attendance which are at present not made.

(4) The work should be more efficient when one Officer oversees the children for the entire age range than when it is, as at present, arbitrarily divided at about the age of five, or earlier.

During the year the Committee have had under consideration the amalgamation of the Staffs and the Secretary for Education and the County Medical Officer of Health have jointly suggested a suitable division of the County.

NURSING. At present there are three different kinds of home visits; Infant visiting is done by Health Visitors, School Nursing by District Nurses (by arrangements between the Education Committee and Northamptonshire Nursing Association) and Tuberculosis Visiting by Tuberculosis Nurses.

The effect of this is that one home is liable to visits by three different nurses.

It is suggested that by arranging for one individual to carry out all these duties in a specified district the necessity for different nurses to cover the same ground to visit the same homes will be obviated; consequently there will be considerable saving in time, labour and expense. The variety of the duties will also tend to make the work more congenial, and the benefit of one nurse supervising the individual from infancy cannot be overlooked. This is now being considered by the Committee.

LIST OF MEDICAL OFFICERS OF HEALTH AT COMMENCEMENT OF 1927.

DISTRICT.	MEDICAL OFFICER OF HEALTH.	RESIDENCE.
URBAN :—		
Brackley (Borough)	G. N. Stathers, M.R.C.S., D.P.H.	Brackley
Daventry (Borough)	A. R. Darley, M.D.	West Haddon, Rugby
Higham Ferrers (Borough)	F. D. Crew, M.B.	Higham Ferrers
Burton Latimer	E. L. Warner, M.D., D.P.H.	Burton Latimer
Desborough	H. Gibbons, M.D., J.P.	Desborough
Finedon	A. Strachan, M.B.	Finedon
Irthlingborough	W. F. Gibb, L.R.C.P.	Irthlingborough
Kettering	J. Allison, M.D., D.P.H.	Kettering
Oundle	B. R. Turner, M.B.	Oundle
Raunds	A. McInnes, M.B., D.P.H.	Raunds
Rothwell	J. More, M.R.C.S.	Rothwell
Rushden	O. A. J. N. Muriset, M.B.	Rushden
Wellingborough	J. Arthur, M.D.	Wellingborough
RURAL :—		
Brackley	G. N. Stathers, M.R.C.S., D.P.H.	Brackley
Brixworth	R. Winterbotham, M.R.C.S.	Brixworth
Crick	A. G. L. Smith, M.R.C.S.	Crick
Daventry	A. R. Darley, M.D.	West Haddon, Rugby
Easton-on-the-Hill	T. P. Greenwood, M.R.C.S.	Stamford
Gretton	J. E. O'Connor, M.B., D.P.H.	Kirby Muxloe, Leicester
Hardingstone	H. F. Percival, O.B.E., M.R.C.S.	Northampton
Kettering	L. W. Dryland, M.R.C.S., D.P.H.	Kettering
Middleton Cheney	J. I. Johnson, L.R.C.P.	Culworth, Banbury
Northampton	H. F. Percival, O.B.E., M.R.C.S.	Northampton
Oundle	A. F. Elliott, M.B.	Oundle
Oxendon	C. T. Scott, M.D.	Market Harboro'
Potterspury	A. H. Habgood, D.S.O., M.B., D.P.H.	Stony Stratford
Thrapston	A. McInnes, M.B., D.P.H.	Raunds
Towcester	C. Simpson, M.B.	Towcester
Wellingborough	J. Arthur, M.D.	Wellingborough

REPORTS OF MEDICAL OFFICERS OF HEALTH.

The following table shows the date on, and the ultimate or temporary form in, which the respective Annual Reports were received :—

Name of District.	*Date of Receipt.*	*Form.*
Gretton Rural	16th March, 1927	Typed
Brackley Borough	6th April, ,,	Printed
Brackley Rural	12th ,, ,,	,,
Daventry Borough	20th ,, ,,	,,
Daventry Rural	20th ,, ,,	,,
Burton Latimer Urban	20th ,, ,,	,,
Rothwell Urban	29th ,, ,,	,,
Oxendon Rural	29th ,, ,,	,,
Potterspury Rural	14th May ,,	,,
Towcester Rural	17th ,, ,,	,,
Higham Ferrers Borough	23rd ,, ,,	,,
Oundle Urban	23rd ,, ,,	,,
Irthlingborough Urban	1st June ,,	,,
Thrapston Rural	1st ,, ,,	,,
Kettering Urban	4th ,, ,,	,,
Desborough Urban	8th ,, ,,	,,
Oundle Rural	8th ,, ,,	,,
Raunds Urban	13th ,, ,,	,,
Hardingstone Rural	18th ,, ,,	,,
Northampton Rural	18th ,, ,,	,,
Easton-on-the-Hill Rural	21st ,, ,,	Typed
Brixworth Rural	22nd ,, ,,	Printed
Middleton Cheney Rural	24th ,, ,,	,,

During the year there were seven **Local Inquiries** held by Officers of the Ministry of Health in respect of matters for public health purposes, particulars of which are attached :—

CHIEF VITAL STATISTICS.

The following is a brief summary of the Chief Vital Statistics for the Administrative County for the year 1926 :—

*BIRTHS. 3,393 births were registered, giving a birth-rate of 15·84 per 1,000 of the population.

*INFANTILE MORTALITY. The number of deaths under one

---

* Further reference to Births, Infantile Mortality and Maternal Mortality is made in the Maternity and Child Welfare section of the Report.

MINISTRY OF HEALTH INQUIRIES.

Date.	District.	Subject.	Result.	Progress of Scheme.
13th January	Towcester Rural	Sanction to borrow £7,400 for works of sewerage and sewage disposal for the Contributory place of Blisworth.	£4,910 sanctioned.	Awaiting signature of accepted tender to Contract.
30th March	Potterspury Rural	Sanction to borrow the sums of £677, £95, and £1,128 for works of water supply for the Contributory places of Passenham, Furtho, and Cosgrove respectively.	Scheme Approved.	The Reservoir and Pumping Plant have been erected and the laying of the mains will be complete by the end of February, 1927. It is contemplated that the Scheme will be completed and in use by the beginning of March, 1927.
7th July	Thrapston Rural	Sanction to borrow £8,600 for works of water supply for the Contributory place of Thrapston.	Application approved and Sanction issued for £500 for trial Well as preliminary to Main Scheme.	Trial Well in course of being sunk.
8th July	Thrapston Rural	Sanction to borrow £820 for works of water supply for the Contributory place of Woodford.	Scheme not approved.	Alternative Scheme being investigated.
8th July	Thrapston Rural	Sanction to borrow £500 for works of sewerage and sewage disposal for the Contributory place of Islip.	Scheme not approved.	Abandoned pro tem.
16th Sept.	Hardingstone Rural	Sanction to borrow £1,550 for works of sewerage for Contributory place of Milton.	The application for sanction to borrow was adjourned as the Ministry of Health expressed a strong desire to have the water supply of the village made efficient before the question of sewerage was dealt with.	No progress.
13th October	Middleton Cheney Rural	Sanction to borrow (a) £1,100 for works of sewerage and sewage disposal, and	The Ministry of Health refused to approve Council's scheme for dealing with the sewage.	—
		(b) £400 for works of water supply for the parish of Middleton Cheney.	Scheme approved.	Council still negotiating with various owners of land affected.

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year of age amounted to 177, which corresponds to a rate of 52 per 1,000 births.

*MATERNAL MORTALITY. 16 deaths occurred from Childbirth, giving a rate of 4·71 per 1,000 births.

GENERAL MORTALITY. 2,436 deaths occurred from All Causes, giving a general death-rate of 11·37 per 1,000 of the population. (Further reference is made later under heading of Mortality).

NETT EXPENDITURE FOR PUBLIC HEALTH SERVICES.

The product of a penny rate in this County is £5,485.

The cost to the rates of the Public Health Services in the Administrative County for the year ending March 31st, 1926, is as follows :—

	Rate in £.	Cost to the Rates per head.
Maternity and Child Welfare (including Midwives Act) ...	·504	3·069
Venereal Diseases	·033	·199
Tuberculosis	·989	5·906
General Public Health	·458	2·737
Total	1·984	11·911

It will be seen from the above that the total cost of the health services in the County administered by the Public Health Department entails a rate of 1·984d.

GENERAL STATISTICS.

Area. The area of the Administrative County is 581,679 acres. It is divided into 13 Urban Districts with an acreage of 42,788 and 16 Rural Districts with an acreage of 538,891.

Population. In the Census Returns for 1921 the Population of the Administrative County was given as **211,509.** The population for the year 1925 as estimated by the Registrar-General was 215,300 ; his estimate for the year 1926 is 214,200, which means an increase of 2,691 on the census population of 1921 and a decrease of 1,100 on last year's estimated population. The estimated population for the Urban Districts is 101,300 which is 600 less than that of last year, and for the Rural Districts 112,900 or 500 less than that of last year. While it is reasonable to suppose that the population in the Rural Districts has decreased, it is not easy to understand why the Urban areas should have decreased by the above figure; e.g., the Urban District of Kettering is said to have decreased since last year from 30,680 to 30,580.

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* Further reference to Births, Infantile Mortality and Maternal Mortality is made in the Maternity and Child Welfare section of the Report.

The following information is taken from the Census figures of 1921, and does not include the County Borough of Northampton.

PRIVATE FAMILIES. The number of private families in the Administrative County is 52,286 comprising 205,907 persons; of these, 29,334 are in the Rural Districts comprising 112,476 persons, and 22,952 in the Urban Districts comprising 93,431 persons.

OCCUPIED DWELLINGS. The number of occupied dwellings in the Administrative County is 50,538 with 265,452 occupied rooms; of these 28,988 are in the Rural Areas with 148,628 occupied rooms and 21,550 in the Urban Areas with 116,824 occupied rooms.

ROOMS PER PERSON. In the Administrative County the number of rooms per person is 1·28, in the Urban Areas 1·25 and in the Rural Areas 1·32.

PRINCIPAL OCCUPATIONS IN THE ADMINISTRATIVE COUNTY.

Occupation.	*Male.*	*Female.*	*Total.*
Agriculture	16466	511	16977
Mining and Quarrying	2224	1	2225
Metal Workers	4870	40	4910
Workers in Skin and Leather ...	1757	306	2063
Shoe Operatives	12821	6392	19213
Makers of Textile goods and articles of dress (excluding shoe operatives)	4215	5723	9938
Makers of Food, Drink and Tobacco	1218	87	1305
Workers in Wood	2143	29	2172
Makers of, and Workers in, Paper	349	494	843
Builders, etc.	3790	6	3796

Occupation.	*Male.*	*Female.*	*Total.*
Painters, etc.	814	4	818
Transport Workers	5392	254	5646
Commercial (excluding Clerks) ...	4015	1652	5667
Public Administration and Defence (excluding Professional men and typists)	1309	277	1586
Professional Occupation (excluding Clerks) ...	1274	1709	2983
Persons engaged in Personal Service	1628	7532	9160
Clerks, Draughtsmen, Typists (not Civil Service or Local Authority)	1293	1258	2551
Retired or not gainfully occupied	9678	59921	69599
	75256	86196	161452

GEOLOGICAL AND OTHER FEATURES.

The Administrative County of Northampton is situated almost in the centre of England. It is of irregular shape, and runs from North-East to South-West of England. Its length is about 62 miles and its width varies from 7 to 32 miles. The County is bounded :—On the West by Warwick and Oxford, on the North by Leicester, Rutland and Soke of Peterborough, on the East by Huntingdon and on the South by Bedford, Buckingham and Oxford. It is well wooded and undulating and has two ranges of hills.

The principal rivers are the Nene and the Welland which flow into the North Sea ; the former has two heads near Daventry the streams from which join at Northampton and thence form a river passing through Peterborough to the sea ; the latter rises at Sibbertoft and forms the Northern boundary of the County flowing easterly through Stamford to the sea.

In the South of the County is the Tove which rises at Sulgrave and flows through Towcester to the Ouse.

The Cherwell rises at Charwelton and flows South on the borders of the County and through Banbury.

The Avon rises at Naseby and flows through Welford into Leicestershire.

Northamptonshire belongs to the lower oolite formation and is well supplied with limestone. Throughout a large portion of the County iron-ore occurs. The produce is chiefly grass and corn; more than one half of the acreage being permanent pasture land. There are many large grazing establishments, and many dairies.

As stated earlier in the Report, the manufacture of boots and shoes is the principal industry.

The County is also noted for its fox-hunting.

The climate is healthy and bracing.

Summary of General Provisions of Health Services available for Administrative County.

A. HOSPITALS AND HOMES.

(1) General Hospitals.	Beds
Brackley Cottage Hospital	6
Kettering and District General Hospital... ...	79
Northampton General Hospital	231
Peterborough Infirmary	78
Wellingborough Cottage Hospital	23

In addition to the above, Stamford, Rutland and

General Infirmary	50
Horton Infirmary, Banbury	54
Hospital of St. Cross, Rugby	100

are just outside the borders of, and admit cases from, this County.

(2) Orthopædic Hospitals.	
Manfield Orthopædic Hospital	70

(3) Tuberculosis Hospitals.	
Rushden House Sanatorium	70
Creaton Sanatorium	66

(4) MENTAL HOSPITALS.

County Mental Hospital (Berry Wood) ...	950
St. Andrew's Hospital (Northampton) ...	480

(5) MATERNITY HOMES.

Queen Victoria Nursing Institution, Northampton.
Kettering General Hospital.
Stamford, Rutland and General Infirmary.
Warwickshire County Maternity Home, Rugby.

(6) INFECTIOUS DISEASES HOSPITALS.

Brixworth Rural Isolation Hospital.
Daventry Rural Isolation Hospital.
Hardingstone Rural Infectious Diseases Hospital.
Kettering Joint Isolation Hospital.
Oundle Joint Isolation Hospital.
Wellingborough Urban Infectious Diseases Hospital.

(7) INSTITUTION FOR UN-MARRIED MOTHERS.

St. Saviour's Home, Northampton.

(8) VENEREAL DISEASES WARDS:

Northampton General Hospital.
Peterborough Infirmary.

(9) CONVALESCENT HOMES.

St. John's Convalescent Home, Weston Favell.
Northampton General Hospital Convalescent Home, Dallington.

AMBULANCE.

ORDER OF ST. JOHN AND BRITISH RED CROSS SOCIETY HAVE HOME SERVICE AMBULANCES

at Daventry, Desborough, Irthlingborough, Kettering, Northampton (2), Rushden, and Wellingborough.

SPECIAL SCHOOLS, CLINICS, ETC.

SPECIAL SCHOOLS.

Kettering Special School.
Mr. Ince Jones' Special School for the Deaf, Northampton. (Private).

MATERNITY AND CHILD WELFARE CENTRES.

Burton Latimer.
Byfield.
Cold Ashby.
Daventry.
Desborough.
Grendon.
Harleston.
Irchester.
Long Buckby.
Rothwell.
Towcester.
Wellingborough.

TUBERCULOSIS DISPENSARIES. (County Council).

Northampton. Kettering. Wellingborough.

VENEREAL DISEASES CLINICS.

Northampton General Hospital.
Peterborough Infirmary.

NURSING.

GENERAL.

Northamptonshire Nursing Association.

MIDWIFERY.

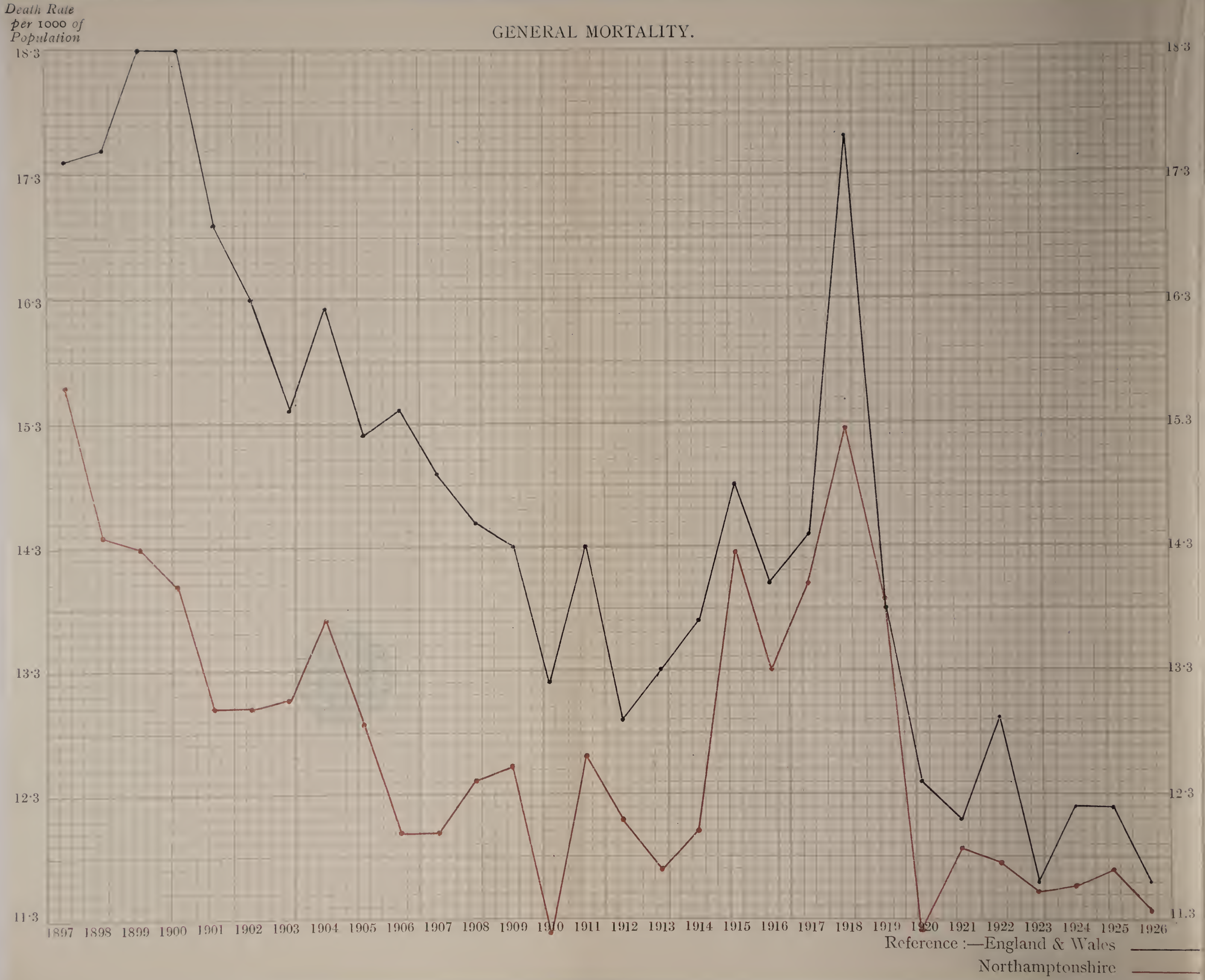
Northamptonshire Nursing Association.

HEALTH VISITING.

1 Superintendent.
9 Permanent Health Visitors.
2 Temporary Health Visitors.
30 District Nurses.
1 Assistant Superintendent. Northamptonshire Nursing Association.

NURSING OF INFECTIOUS DISEASES.—There is an arrangement between the Northamptonshire Nursing Association and the County Council for the nursing of Measles. Whooping Cough and Diarrhœa in young children, as well as cases of Ophthalmia Neonatorum, Puerperal Fever and Poliomyelitis, when Measles is not very prevalent. (This arrangement was extended during 1927, to include Puerperal Pyrexia and Cerebro-Spinal Fever).

GENERAL MORTALITY.



Reference :—England & Wales ———

Northamptonshire ———

TABLE I.

DISTRICTS.	Populations.	General Mortality.		Tuberculosis Mortality.		Respiratory Diseases Mortality.		Cancer Mortality.		Zymotic Diseases Mortality.		Heart and Circulat'ry Diseases Mortality.		Nephritis Mortality.		Other Defined Diseases. Mortality.	
		Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.	Number of D'ths.	Rate per 1,000 of population.
BRACKLEY ... BOROUGH	2,198	27	12·2	1	0·45	6	2·72	3	1·36	...	...	2	0·90	1	0·45	8	3·63
DAVENTRY ... ,,	3,496	49	14·0	...	...	5	1.43	5	1·43	...	...	13	3·71	1	0·28	13	3·71
HIGHAM FERRERS ,,	3,091	23	7·4	2	0·64	1	0·32	7	2·26	1	0·32	4	1·29	...	...	...	...
BURTON LATIMER URBAN	3,524	39	11·0	2	0·56	3	0·85	4	1·13	2	0·56	9	2·55	1	0·28	6	1·70
DESBOROUGH ... ,,	4,385	45	10·2	6	1·36	2	0·45	7	1·59	1	0·22	9	2·05	1	0·22	2	0·45
FINEDON ... ,,	4,099	36	8·7	4	0·97	6	1·46	3	0·73	1	0·24	9	2·19	1	0·24	8	1·95
IRTHLINGBOROUGH ,,	4,983	42	8·4	6	1·20	5	1·00	6	1·20	1	0·20	10	2·00	3	0·60	7	1·40
KETTERING ... ,,	30,580	303	9·9	30	0·98	39	1·27	40	1·30	7	0·22	57	1·86	4	0·13	59	1·92
OUNDLE ... ,,	2,600	22	8·4	2	0·76	...	...	6	2·30	1	0·38	2	0·76	1	0·38	6	2·30
RAUNDS ... ,,	3,753	50	13·3	1	0·26	2	0·53	6	1·59	...	...	11	2·93	1	0·26	17	4·52
ROTHWELL ... ,,	4,711	56	11·8	4	0·84	10	2·12	5	1·06	1	0·21	14	2·97	...	...	13	2·75
RUSHDEN ... ,,	13,520	131	9·0	12	0·88	18	1·33	23	1·70	...	...	23	1·70	1	0·07	19	1·40
WELLINGBOROUGH ,,	20,360	240	11·7	26	1·27	21	1·03	27	1·32	2	0·09	63	3·09	6	0·29	43	2·11
Combined Urban Districts ...	**101,300**	**1,063**	**10.49**	**96**	**0.94**	**118**	**1.16**	**142**	**1.40**	**17**	**0.16**	**226**	**2.23**	**21**	**0.20**	**201**	**1.98**
BRACKLEY ... RURAL	6,524	81	12·4	2	0·30	10	1·53	10	1·53	3	0·45	19	2·91	1	0·15	19	2·91
BRIXWORTH ... ,,	11,800	127	10·7	9	0·76	12	1·01	21	1·77	4	0·33	16	1·35	1	0·08	31	2·62
CRICK ... ,,	2,408	45	18·6	...	...	4	1·66	7	2·90	1	0·41	6	2·49	3	1·24	16	6·64
DAVENTRY ... ,,	13,850	162	11·6	7	0·50	24	1·73	28	2·02	5	0·36	21	1·51	10	0·72	41	2·96
EASTON-ON-THE-HILL ,,	1,497	19	12·6	1	0·66	...	...	3	2·00	...	...	9	6·01	...	...	4	2·67
GRETTON ... ,,	1,388	21	15·1	1	0·72	1	0·72	5	3·60	...	...	3	2·16	1	0·72	3	2·16
HARDINGSTONE ... ,,	7,442	89	11·9	4	0·53	14	1·88	13	1·74	3	0·40	21	2·82	2	0·26	19	2·55
KETTERING ... ,,	9,421	109	11·5	3	0·31	16	1·69	15	1·59	1	0·10	20	2·12	5	0·53	27	2·86
MIDDLETON CHENEY ,,	2,342	33	14·0	2	0·85	4	1·70	4	1·70	...	...	4	1·70	1	0·42	9	3·84
NORTHAMPTON ... ,,	8,151	95	11.6	6	0·73	14	1·71	7	0·85	6	0·73	19	2·33	3	0·36	18	2·20
OUNDLE ... ,,	6,505	83	12·7	1	0·15	13	1·99	14	2·15	2	0·30	15	2·30	...	...	28	4·30
OXENDON ... ,,	3,902	65	16·6	3	0·76	9	2·30	10	2·56	...	...	14	3·58	...	...	13	3·33
POTTERSPURY ... ,,	4,780	52	10·8	4	0·83	6	1·25	9	1·88	1	0·20	4	0·83	...	...	17	3·55
THRAPSTON ... ,,	10,350	131	12·6	7	0·67	12	1·15	19	1·83	1	0·09	23	2·22	7	0·67	35	3·38
TOWCESTER ... ,,	9,870	116	11·7	5	0·50	9	0·91	17	1·72	1	0·10	19	1·92	4	0·40	38	3·84
WELLINGBOROUGH ,,	12,670	145	11·4	13	1·02	16	1·26	18	1·42	2	0·15	30	2·36	2	0·15	25	1·81
Combined Rural Districts ...	**112,900**	**1,373**	**12.16**	**68**	**0.60**	**164**	**1.45**	**200**	**1.77**	**30**	**0.26**	**243**	**2.15**	**40**	**0.35**	**343**	**3.03**
Administrative County ...	**214,200**	**2,436**	**11.37**	**164**	**0.76**	**282**	**1.31**	**342**	**1.59**	**47**	**0.21**	**469**	**2.18**	**61**	**0.28**	**544**	**2.54**

LABORATORY.

(1) Chemical.	County Analyst, E. W. Voelcker, Stuart House, 1, Tudor Street, New Bridge Street, London, E.C.
(2) Pathological and Bacteriological.	Northampton General Hospital.

MORTALITY.

General.—The number of deaths in the Administrative County during 1926 was 2,436 (1,208 males and 1,228 females). Of these deaths, 1,063 occurred in the Urban Districts and 1,373 in the Rural Districts.

The death-rate during 1926 was 11·37 per 1,000 of the population as compared with 11·72 for 1925. This is the lowest death-rate on record with the exception of the years 1910 and 1920.

The accompanying Chart compares the death-rates in England and Wales and the County from 1897 to 1926.

The rate for England and Wales for the year 1926 was 11·6, as compared with 12·2 for 1925.

Table I. shows the number of deaths, with death-rates per 1,000 of the population for each District in the Administrative County.

In the Urban Districts the highest death-rate was in Daventry Borough (14·0) and the lowest in Higham Ferrers Borough (7·4).

In the Rural Districts the highest death-rate was in Crick (18·6) and the lowest in Brixworth (10·7).

In the Combined Urban Districts the death-rate was 10·49 and in the Combined Rural Districts 12·16.

Tables XIV. and XV. at the end of this report show the distribution and causes of death in the several Districts, and the causes of death at different periods of life in the whole Administrative County, respectively, for the year 1926.

Cancer.—During the year 1926, there were 342 deaths from Cancer (167 males and 175 females). This corresponds to a death-rate of 1·59 per 1,000 of the population as compared with 309 deaths and a rate of 1·43 for 1925. In the Combined Urban Districts there were 142 deaths corresponding to a rate of 1·40 and in the Combined Rural Districts there were 200 deaths giving a rate of 1·77. 79 per cent. of the deaths were among people of 45 years of age and upwards.

In Table I. will be seen the deaths and death-rate in each District.

A great deal of research is being carried out as to the causation of Cancer, and while there is some reason to consider that it is due to an organism, nothing definite has yet been proved.

Theories with regard to Cancer houses and heredity are also not proved. The prognosis with regard to this disease depends a great deal upon early diagnosis and treatment, and while a great amount of good can be done by educational work to ensure early treatment, the propaganda must be carried out with great care owing to the danger of creating undue fear and anxiety among the less stable members of the community.

Heart and Circulatory Diseases.—In the Administrative County there were 469 deaths from diseases of the Heart and Circulatory System (221 males and 248 females) corresponding to a death-rate of 2·18 per 1,000 of the population compared with 443 and 2·08 in 1925. Of these, 226 occurred in the Combined Urban Districts with a rate of 2·23 per 1,000, and 243 in the Combined Rural Districts with a rate of 2·15. In Table I., facing page 23, will be found the deaths and death-rates from these diseases for the several Districts of the County.

Nephritis.—In the Administrative County there were 61 deaths (36 males and 25 females) from Nephritis, giving a death-rate per 1,000 of the population of 0·28 as compared with 65 and 0·30 for 1925. Of this number, 21, with a rate of 0·20 were in the Combined Urban Districts and 40 with a rate of 0·35 were in the Combined Rural Districts.

The number of deaths and death-rates in each District will be found in Table I., facing page 23.

Respiratory Diseases. (Bronchitis and Pneumonia).—There were 282 deaths (143 males and 139 females) from these diseases in the Administrative County or a death-rate per 1,000 of the population of 1·31 as compared with 278 and 1·29 for 1925. In the Combined Urban Districts there were 118 deaths with a rate of 1·16 and in the Combined Rural Districts 164 deaths with a rate of 1·45.

Table I., facing page 23, shews the number of deaths and the death-rates for each District.

Zymotic Diseases.—In the Administrative County there were 47 deaths (15 males and 32 females) giving a death-rate of 0·21 per 1,000 of the population as compared with 64 and 0·29 for 1925. Of this number, 17 occurred in the Urban Districts and 30 in the Rural Districts, with death-rates of 0·16 and 0·26 respectively. Included in the above figures are Enteric Fever, Small Pox, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Infantile Diarrhœa and Puerperal Sepsis.

Table I., facing page 23, gives the distribution of these deaths in the several Districts.

CONTROL OF INFECTIOUS DISEASES.

Small Pox.—During the year there were no cases of or deaths from Small Pox in the Administrative County. There were, however, three suspicious cases reported, all of which were investigated by the County Medical Officer of Health and pronounced to be not Small Pox. Two contacts were reported as landing from ships in which Small Pox had occurred, and information as to these was immediately forwarded to the District Medical Officers of Health who kept the contacts under observation.

Though epidemics of Small Pox have occurred in various Counties in England, Medical Officers of Health throughout the Country have failed to convince the people of the importance of Vaccination as a safeguard against this disease. It has been shewn that recent Vaccination prevents Small Pox and that less recent Vaccination minimises the character of the disease.

Vaccination is a means of insuring one's children against that loathsome disease, and it is the duty of parents to insure their children. Unvaccinated persons are a danger to the rest of the community and the "Conscience" clause in the Vaccination Act should, even if not removed entirely, be made less easy of abuse.

It is only when a Small Pox epidemic occurs that the apathetic are roused and the conscientious objectors ignore their conscience and with their families rush to the Public Vaccinator.

The Table facing this page gives an analysis of the Vaccination Officer's Returns from 1893—1925, and in it will be seen

(1) the great decrease in the Certificates of Successful Vaccination—from 46·1 per cent. in 1903 to 17·3 in 1925.

(2) the large increase in the number of Certificates of Conscientious Objection—from 21·6 in 1898 to 75·6 in 1925, and

(3) the serious increase in the total number unvaccinated—from 45·7 in 1903 to 78·1 in 1925.

It will be seen that the worst offenders are in the following Districts :—Kettering, Northampton, Hardingstone, Thrapston and Wellingborough. The appalling conditions which will be experienced in this County should an epidemic of Small Pox occur can be visualised when one considers that 78·1 per cent. of the children born in the Administrative County during the year 1925 are un-vaccinated, while 17·3 per cent. only have been successfully vaccinated. It is hard to believe that 75·6 per cent. of the parents of children born in 1925 conscientiously believe that Vaccination is prejudicial to the health of such children. One is compelled to hold the

ANALYSIS OF VACCINATION OFFICERS' RETURNS, 1893-1925.

Unions in the County of Northampton	Percentages of Births in Respective Years.																																			Unions in the County of Northampton.
	Certificates of "Successful Vaccination." (Col. 1)									Certificates of "Conscientious Objection." (Col. 2)								Not finally accounted for. (Col. 3)									Total Living Unvaccinated. (Col. 2 + Col. 3).									
	1893-97	1898-1902	1903-1907	1908-1912	1913-1917	1918-1922	1923	1924	1925	1898-1902	1903-1907	1908-1912	1913-1917	1918-1922	1923	1924	1925	1893-97	1898-1902	1903-1907	1908-1912	1913-1917	1918-1922	1923	1924	1925	* 1893-97	1898-1902	1903-1907	1908-1912	1913-1917	1918-1922	1923	1924	1925	
BRACKLEY	39.1	51.3	68.9	30.0	23.7	12.4	39.4	37.8	24.2	10.7	13.6	47.4	60.4	68.1	52.9	55.4	66.2	47.7	30.8	9.2	16.7	11.1	13.2	2.9	3.0	5.7	49.3	41.6	22.8	64.1	71.5	81.3	55.8	58.4	71.9	BRACKLEY
BRIXWORTH	42.9	50.6	58.6	39.3	28.2	15.4	29.4	22.5	30.2	14.4	20.9	51.6	62.5	68.2	50.7	65.0	57.8	44.2	28.0	12.9	5.1	3.7	12.9	17.2	10.2	7.8	49.2	42.5	33.9	56.7	66.2	81.1	67.9	75.2	65.6	BRIXWORTH
DAVENTRY	51.1	56.9	64.3	35.6	23.6	26.0	38.7	34.4	29.7	15.0	18.4	48.5	61.8	65.5	52.2	56.4	63.4	36.3	19.8	10.5	9.8	8.8	4.5	5.1	4.3	1.4	39.4	34.8	28.9	58.4	70.7	70.0	57.3	60.7	64.8	DAVENTRY
HARDINGSTONE	38.5	48.9	47.2	23.5	15.3	10.8	17.0	16.6	14.4	34.4	41.0	68.7	76.8	82.7	75.7	78.3	79.5	42.7	8.2	4.3	2.4	2.3	1.9	2.0	1.4	2.8	51.1	42.7	45.3	71.0	79.2	84.6	77.7	79.7	82.3	HARDINGST'NE
KETTERING	1.6	17.3	28.5	13.2	6.8	5.8	6.6	7.2	9.8	21.4	51.9	76.9	83.8	85.1	86.6	87.0	83.3	84.2	47.7	10.2	2.6	2.7	2.9	1.6	1.6	2.1	84.2	69.2	62.1	79.6	86.5	88.0	88.2	88.6	85.4	KETTERING
NORTHAMPTON	3.7	16.6	24.8	17.2	11.1	8.7	12.4	9.8	12.1	31.4	56.4	70.5	77.5	80.3	79.6	84.6	80.2	74.2	39.8	10.1	5.5	5.2	5.7	3.3	2.1	2.0	83.3	71.2	66.5	76.0	82.8	86.0	82.9	86.7	82.2	NORTHAMPT'N
OUNDLE	82.8	85.1	81.4	54.4	32.1	26.0	42.6	46.5	37.2	3.3	5.2	35.0	54.9	59.3	50.9	50.0	55.8	9.0	4.8	6.5	5.0	8.2	9.4	3.1	1.3	4.1	9.2	8.1	11.7	40.0	63.2	68.7	54.0	51.3	59.9	OUNDLE
†PETERBOROUGH ...	84.0	76.3	77.6	52.4	37.6	30.3	36.9	34.1	29.8	2.1	4.4	35.1	52.2	60.1	55.9	59.5	64.6	7.6	11.1	10.2	6.3	4.7	4.4	3.1	1.7	2.0	7.6	13.2	14.6	41.4	57.0	64.5	59.0	61.2	66.6	†PETERBORO'
POTTERSPURY	58.9	57.5	60.4	28.8	20.0	15.5	28.1	18.1	20.5	27.4	29.7	64.6	74.6	77.9	64.0	78.0	74.5	29.2	6.1	3.4	1.4	1.2	2.8	1.5	1.0	2.7	33.0	33.5	33.2	66.1	75.9	80.7	65.5	79.0	77.2	POTTERSPURY
THRAPSTON	10.9	38.7	47.2	18.6	15.3	9.7	12.6	12.9	10.0	43.8	40.9	70.6	76.7	84.8	79.1	82.9	84.8	72.0	9.9	4.9	7.1	1.6	1.5	4.0	1.2	.	79.7	53.7	45.8	77.8	78.4	86.3	83.1	84.1	84.8	THRAPSTON
TOWCESTER	38.9	47.9	49.6	25.0	20.1	15.9	28.8	30.6	23.5	27.4	29.6	65.8	70.5	75.2	62.3	63.8	65.3	43.9	16.2	12.5	3.6	2.9	4.0	4.7	1.8	4.5	50.7	43.6	42.1	69.5	73.4	79.2	67.0	65.6	69.8	TOWCESTER
WELLINGBOROUGH ...	1.1	16.2	40.5	19.5	8.8	7.5	11.6	9.3	8.1	22.4	45.5	71.0	82.0	83.9	81.2	80.7	84.9	82.2	50.8	5.6	2.5	3.6	2.9	2.9	5.4	2.7	86.4	73.2	51.2	73.5	85.6	86.8	84.1	86.1	87.6	WELLINGBORO'
MEANS	25.7	35.4	46.1	26.3	17.7	14.2	20.4	18.0	17.3	21.6	37.0	62.3	72.0	75.9	71.6	75.3	75.6	58.4	32.2	8.7	4.9	4.4	4.7	3.4	2.7	2.5	62.8	53.9	45.7	67.3	76.5	80·6	75.0	78.0	78.1	MEANS.

* In the returns for the years 1893—97 the number of Certificates of Conscientious Objection received in respect of the children born in 1897 has not been included in the Percentages "Not finally accounted for," but allowance has been made for these in the "Total Living Unvaccinated."

† The Soke of Peterborough is a County in itself, and I am therefore much indebted to the courtesy of the Clerk of the Peterborough Union for furnishing me with information for the purposes of this table.

N.B.—The Rural Districts of Crick, Oxendon, Gretton, Easton-on-the-Hill, and Middleton Cheney are included in Unions in the Counties of Warwick, Leicester, Rutland, Lincoln, and Oxford, and do not therefore enter into the above Analysis; on the other hand the Unions of Brackley, Oundle and Thrapston, Potterspury, and Wellingborough, include a few parishes in Bucks. and Oxon., Hunts. Bucks., and Beds. respectively. The Union of Northampton includes the Borough of Northampton, except the parish of Far Cotton, which is included in the Union of Hardingstone.

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TABLE II.

Cases of Infectious Disease Notified during the Year 1926.

(52 weeks ended 1st January, 1927.)

DISEASES.	URBAN DISTRICTS.														RURAL DISTRICTS.																	
	Brackley (Borough)	Daventry (Borough)	Higham Ferrers (Boro')	Burton Latimer	Desborough	Finedon	Irthlingborough	Kettering	Oundle	Raunds	Rothwell	Rushden	Wellingborough	**Totals for Combined Urban Districts.**	Brackley	Brixworth	Crick	Daventry	Easton-on-the-Hill	Gretton	Hardingstone	Kettering	Middleton Cheney	Northampton	Oundle	Oxendon	Potterspury	Thrapston	Towcester	Wellingborough	**Totals for Combined Rural Districts.**	**Totals for Administrative County.**
*Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Scarlet Fever	1	3	6	2	1	7	7	131	32	3	2	25	45	**265**	2	19	...	15	1	1	10	24	...	17	18	10	2	90	3	16	**228**	**493**
*Diphtheria (including Membranous Croup) ...	...	1	...	...	...	2	2	4	1	...	2	1	6	**19**	6	1	...	6	1	...	1	3	1	11	...	1	1	5	4	4	**45**	**64**
*Erysipelas	...	1	...	3	...	4	5	23	1	7	3	4	6	**57**	3	1	...	4	...	...	5	7	...	...	1	3	2	6	2	2	**36**	**93**
Ophthalmia Neonatorum ...	...	...	...	...	...	1	...	5	...	2	1	...	...	**9**	1	...	...	...	...	...	...	...	1	2	...	...	...	2	...	...	**6**	**15**
Cerebro-Spinal Fever	...	...	...	...	1	...	...	...	...	...	...	...	...	**1**	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	**1**	**2**
Acute Poliomyelitis	...	...	...	...	...	...	...	1	...	...	...	...	...	**1**	1	1	...	1	...	...	2	...	...	...	...	1	...	...	...	...	**6**	**7**
Encephalitis Lethargica ...	...	...	...	...	...	...	1	6	...	1	...	2	...	**10**	...	1	...	1	...	...	...	1	...	1	...	...	...	1	...	...	**5**	**15**
*Enteric Fever	...	...	...	...	...	...	1	...	...	1	...	...	1	**3**	...	1	...	...	...	...	...	...	...	5	...	...	...	1	1	2	**10**	**13**
*Puerperal Fever	...	...	...	...	...	1	...	4	...	...	2	1	...	**8**	...	3	...	1	...	1	1	1	...	3	...	1	1	...	1	...	**13**	**21**
†*Puerperal Pyrexia	...	...	...	...	...	...	...	2	1	...	...	2	1	**6**	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	2	**5**	**11**
Tuberculosis of the Respiratory System...	1	1	5	2	5	7	11	47	2	7	8	15	46	**157**	5	20	1	24	1	1	11	4	1	11	3	7	3	18	7	24	**141**	**298**
Other Forms of Tuberculosis	...	1	1	1	2	...	3	9	...	...	1	3	9	**30**	1	3	1	7	2	...	2	3	...	7	...	1	1	4	2	6	**40**	**70**
Pneumonia	...	1	3	3	...	4	2	42	...	8	1	25	10	**99**	2	3	3	7	...	2	12	11	...	11	2	5	6	4	8	4	**80**	**179**
Totals	**2**	**8**	**15**	**11**	**9**	**26**	**32**	**274**	**37**	**29**	**20**	**78**	**124**	**665**	**21**	**53**	**5**	**69**	**5**	**5**	**44**	**54**	**3**	**68**	**24**	**30**	**16**	**131**	**28**	**60**	**616**	**1,281**

* The notifications shewn in respect of these diseases are as furnished by the Registrar-General; the remaining notifications shewn on the table are compiled from the weekly Returns of the District Medical Officers of Health.

1 Human Anthrax—Irthlingborough Urban.
1 Acute Polio-Encephalitis—Daventry Rural.
2 Dysentery—Northampton Rural.

† Notifiable since 1st October, 1926.

opinion that a number of the parents object not so much because they consider that their children's health will be prejudiced but that they object to the small discomfort and trouble to which they themselves would be put by Vaccination.

This opinion is borne out by the fact that during the Small Pox epidemic of 1925, 1,176 children under 14 years of age were vaccinated in the area of the Kettering Union.

In my opinion the mild character of the present epidemic in the Country is due to previous Vaccination, which although it has lost its power of preventing the disease, yet minimises the character of the symptoms and signs. In any efficient scheme, Vaccination in Infancy and re-vaccination at definite intervals afterwards should be made compulsory.

Scarlet Fever.—During the year, 493 cases of Scarlet Fever were notified, of which 9 died. Of these numbers, 265 and 5 occurred in the Urban Districts and 228 and 4 in the Rural Districts. The number of notifications shows a tremendous decrease as compared with 1924 and 1925. In 1924, 1.026 cases were notified and in 1925, 842 cases. The largest number of cases occurred during the months of March, April, May, October and November, May showing the largest figure. The case mortality rate was 1·82 per cent.

Table II., facing this page, gives the numbers of notifications of all infectious diseases in each District of the County.

A slight epidemic occurred among the boys at Oundle School and two patients died. 90 cases occurred in the Northants. portion of the Thrapston Rural District ; the epidemic was a mild one and there were no deaths. The parishes with the largest numbers of cases were situated in close proximity to each other and as proper isolation in the homes was inadequate the spread of the disease was not easy to control.

Diphtheria (including Membraneous Croup).—In the Administrative County only 64 cases were notified during the year. This figure shows a marked decrease on those for 1925 and 1924, when there were 132 cases and 185 cases respectively.

Of the 64 cases notified 3 died, giving a case mortality of 4·68 per cent. as against 6·06 for 1925 and 8·64 for 1924. In the Combined Urban Districts 19 cases were notified, and in the Combined Rural Districts there were 45 cases with 3 deaths.

Of the 6 cases in Brackley Rural District, five were at Hinton. Of the eleven cases in Northampton Rural District seven occurred at Dallington and two at Duston. No cases occurred, however, in epidemic form, and those at Dallington were deemed to be possibly due to a "carrier."

A Clinical test is known by means of which individuals can be tested as to their susceptibility or otherwise to Diphtheria. This test is known as the Schick test.

The test is carried out by injecting into the skin of the right arm 0·2 c.c. of a freshly made dilution of Diphtheria toxin. As a control, a similar amount of the same solution, previously heated to destroy the toxin is injected into the skin of the left arm. The results are apparent in 24—96 hours.

In a positive reaction, indicating that the individual is susceptible to Diphtheria, the skin round the site of the injection in the right arm becomes red, while no change occurs in the left arm.

In a negative reaction, indicating that the individual is immune to Diphtheria, no reaction occurs in either arm.

There may, however, be a false reaction in which a certain amount of redness lasting a short time occurs in both arms.

By means of the Schick test the community has in its hands a method of controlling Diphtheria if it desires to use it. In epidemics especially the test is of the utmost value, as the community can be divided into two groups, the immune and the susceptible.

In addition to the test for judging susceptibility to Diphtheria it is also possible to create artificial immunity by injection of toxin-antitoxin. Three inoculations of a mixture of Diphtheria toxins and antitoxin are made at intervals of a week. The immunity created lasts for six years or for life. Active immunity by this means can be induced into more than 95 per cent. of individuals susceptible to Diphtheria.

In infants under 5 years as a rule, there is neither local nor constitutional reaction.

By means of the Schick test and the artificial immunisation of susceptible individuals it should, therefore, be possible to control and practically eliminate Diphtheria in the country. Owing to absence of reaction in children under 5, I suggest that mothers be invited to have their infants inoculated at Maternity and Child Welfare Centres.

Enteric Fever.—In the Administrative County 13 cases were notified during the year, of which 3 died. Of the cases notified, 3 were in the Urban Districts and in the Rural Districts there were 10 cases with 3 deaths. The cases notified were sporadic and there were no indications of the disease taking epidemic form.

Puerperal Sepsis.—Twenty-one cases of Puerperal Fever were notified in the Administrative County, of which 8 occurred in Urban Districts and 13 in Rural Districts. Two deaths from Puerperal Sepsis occurred in the Urban Districts and 7 in the Rural Districts.

(Further reference is made to Puerperal Sepsis under Maternal Mortality.)

Erysipelas.—Ninety-four cases of Erysipelas were notified, 57 occurred in the Urban Districts and 37 in the Rural Districts. These figures show an increase as compared with 79 for 1925.

Measles (and German Measles).—During the year there were 3 deaths from Measles, one in the Urban Districts and two in the Rural Districts.

Measles was prevalent in a few Districts during April, May, June, August and September, prevalences being noted for varying periods in Desborough, and in parishes in Kettering, Oundle, Oxendon and Wellingborough Rural Districts, and German Measles similarly from January to May, prevalences being recorded in Desborough, and in parishes in Brixworth, Crick, and Oxendon Rural Districts.

Whooping Cough.—During the year, 11 children died from Whooping Cough in the County, 5 in the Urban Districts and 6 in the Rural Districts, as compared with 26 deaths in 1925.

A few cases were notified in five Districts, most of them during October. A serious epidemic occurred at Burton Latimer during the first quarter with two deaths.

Chicken Pox.—The symptoms of Chicken Pox are so mild that a great number of cases are missed and the School Medical Inspectors frequently find children in School suffering from this disease who are unaware that they are affected. There is special importance attached to Chicken Pox during the prevalence of Small Pox, and owing to the mild character of the latter disease the diagnosis is often difficult. Notification of Chicken Pox was compulsory for varying periods in the year in the following Districts :—Burton Latimer, Irthlingborough, Kettering, Raunds, Rushden, and Wellingborough Urban and Brixworth, Daventry, Kettering, Northampton, Oundle and Wellingborough Rural.

In the Hardingstone and Potterspury Rural Districts, Chicken Pox is permanently included as a notifiable disease.

Cases notified were as follows :—Kettering Urban 299, Wellingborough Urban 160 (and further un-notified cases) Daventry Rural 114, Rushden Urban 99, Finedon Urban 97, Northampton Rural 51, Brixworth Rural 38, and a few cases were recorded in ten other Districts.

Diarrhœa and Enteritis. (Under two years of age). Nine deaths occurred, 4 in the Urban Districts and 5 in the Rural Districts, as compared with 5 deaths in 1925 and 15 in the year 1924.

Influenza.—No mention of this malady was made in any of the Weekly Returns received from the District Medical Officers of Health. During April and May, however, four schools were closed on account of its prevalence. The severity of the disease was less than in recent years, only 37 deaths occurring against 68 for the year 1925 and 102 for the year 1924. Fourteen of the deaths were in the Urban Districts and 23 in the Rural Districts.

Pneumonia.—(Acute Primary and Acute Influenzal).—The notifications during 1926 were slightly less than in the year 1925, being 179 as against 197. The Combined Urban Districts had 99 cases and the Combined Rural Districts had 80 cases. Only five Districts had no cases notified.

From **all forms** of Pneumonia, 129 deaths occurred, (almost equally divided between the Combined Urban and Combined Rural Districts), as against 138 and 103 deaths respectively in the years 1925 and 1924.

Acute Poliomyelitis.—Seven cases were notified, 2 in Hardingstone Rural District and single cases in Kettering Urban and Brackley, Brixworth, Daventry and Oxendon Rural Districts. There were 4 deaths, Kettering Urban 1, Raunds Urban 1, and 2 in Brixworth Rural District.

Encephalitis Lethargica.—Fifteen cases were notified (as against 14 for the year 1924) 6 of which were in Kettering Urban District. Eleven deaths occurred, Kettering Urban 4, Rushden Urban 2, Kettering Rural 2, and one each in Brixworth, Daventry and Thrapston Rural Districts.

Acute Polioencephalitis.—There was one case notified—in Daventry Rural District.

Cerebro-Spinal Fever.—Two cases were notified, Desborough Urban 1 and Daventry Rural 1. The latter case proved fatal. There were no cases nor deaths in 1925, and two cases with one death in 1924.

The County Medical Officer of Health was empowered in July, 1919, to make arrangements under the Cerebro-Spinal Fever Regulations of 1919 for the provision of serum and vaccine and of apparatus for its administration to cases, or suspected cases, of cerebro-spinal fever, and in January, 1927, the County Council agreed :—

(1) That the County Medical Officer of Health be empowered to arrange for expert medical opinion to be obtained for the examination and treatment of persons suspected either to be suffering from cerebro-spinal fever, or who have been in contact with a person suffering or suspected to be suffering from the disease.

(2) That with regard to cases occurring in districts where no Isolation Hospital is available, or which may not necessarily require institutional treatment, the arrangements existing between the County Council and the Northamptonshire Nursing Association for the nursing of cases of Measles and certain other diseases, be extended, on terms to be arranged, to include the nursing of persons suspected either to be suffering from cerebro-spinal fever, or who have been in contact with a person suffering or suspected to be suffering from the disease.

Serum and vaccine and apparatus for their administration can be obtained from the Pathological Laboratory at the Northampton General Hospital, and arrangements are being made for expert medical opinion in connection with the examination and treatment of persons suspected either to be suffering from Cerebro-spinal Fever, or who have been in contact with a person suffering or suspected to be suffering from the disease.

Nursing arrangements have also been entered into as set out under (2) above, and on application to the County Medical Officer of Health a nurse will be sent promptly to any case requiring the services of a nurse.

Mumps.—Prevalences of Mumps appeared for varying periods in parishes in Easton-on-the-Hill and Oxendon Rural Districts.

Dysentery.—Two cases were notified in Northampton Rural District.

Human Anthrax.—One case was notified, in the Irthlingborough Urban District, and admitted to the Northampton General Hospital. The disease was contracted at a Chrome Tannery in Rushden.

Ophthalmia Neonatorum.—This disease is discussed later in the Report under Maternity and Child Welfare.

SCHOOL CLOSURES ON ACCOUNT OF INFECTIOUS DISEASES.

As a result of the new Regulations of the Board of Education whereby schools should only be closed in order to stop the spread of infection, only 16 schools were closed during the year. The following is a list of the Schools closed :—

NAME OF SCHOOL.	PERIOD OF CLOSURE.	CAUSE.
Quinton	15 days	Measles.
Welford and Sulby	22 ,,	
Crick Council	13 ,,	
Watford Council	7 ,,	
Long Buckby Infants'	21 ,,	
Great Oxendon C.E.	11 ,,	
Greens Norton	14 ,,	
Staverton	22 ,,	
Grafton Regis	9 ,,	Chicken Pox.
Staverton	19 ,,	,, ,,
Warmington	9 ,,	Scarlet Fever.
Holdenby	14 ,,	,, ,,
Hinton-in-the-Hedges	21 ,,	Diphtheria.
Great Doddington	26 ,,	Whooping Cough and Scarlet Fever.
Ashby St. Ledgers	7 ,,	Influenza.
Braunston C.E.	12 ,,	,,

For further references to School Closures see Report of School Medical Officer.

INFECTIOUS DISEASES HOSPITALS.

There are three Isolation Hospitals in the County in respect of which annual grants are made towards their establishment expenses, viz. :—

Daventry Rural Isolation Hospital ;
Kettering Joint Isolation Hospital ;
Oundle Joint Isolation Hospital.

During the year, the County Medical Officer of Health inspected these three hospitals and recommended payment of the usual contributions towards their establishment expenses. The following are extracts from his Report to the Public Health Committee :—

DAVENTRY RURAL ISOLATION HOSPITAL.—This hospital is administered by the Daventry Rural District Council, but arrangements are made to admit patients from Daventry Borough, Southam Rural District and Weedon Barracks.

The hospital consists of three buildings :—

1. MAIN BLOCK. The two main wings are used for the treatment of Scarlet Fever and have accommodation for 16 adults and four infants. W.C.'s are attached to each wing, while there is one bathroom containing a moveable bath. The Surgery is used as an Observation Ward and also as an Office for the Night Nurse. The remainder of the ground floor consists of stores, kitchen, scullery, matron's sitting room, etc. On the first floor there are four bedrooms, one bathroom and one W.C. Diphtheria cases are treated in two of these rooms which provide accommodation for five beds and the other two bedrooms are occupied by the matron and two maids. The Scarlet Fever block is entirely satisfactory. The Diphtheria block, however, must be considered as highly unsatisfactory as the staff and patients sleep next door to each other and use a common bathroom and W.C. It is not desirable that the Surgery should be used as an Observation Ward.

I would suggest that the first floor of this building be occupied entirely by the staff, and that two wings similar to the Scarlet Fever block be erected in which can be accommodated the Diphtheria cases and cases for observation.

2. THE COTTAGE. The Cottage consists of a kitchen and small scullery and three Wards with accommodation for seven

adults and one infant. There is one earth closet. This portion of the hospital is retained for diseases other than Diphtheria and Scarlet Fever.

3. OUTBUILDINGS. These include the laundry, a disinfecting room and mortuary. Instead of the present disinfector, I would suggest the installation of a Steam plant

STAFF. Consists of the matron and her husband, one probationer, one kitchen maid and one laundry maid.

SEWAGE. The Sewage is disposed of by means of Septic tanks.

AMBULANCE. There is no regular ambulance, but a cab is hired from Daventry.

The administration of the hospital, as it exists, is entirely satisfactory, and the hospital is kept in excellent condition. The necessity, however, for the matron and staff to be changing their bedrooms for the use of patients is undesirable and arrangements should be made for the accommodation of Diphtheria cases elsewhere.

An Observation Ward should be provided in any new building erected.

A motor ambulance should be provided for the hospital, and also a steam disinfector.

KETTERING JOINT ISOLATION HOSPITAL.—Owing to the periodic increase in the number of beds, the Hospital now consists of five separate buildings :—

1. NURSES' HOME. This building has been added to since its first erection and now accommodates the Matron and the whole of the staff with the exception of one nurse who sleeps in the Observation Block. There is a great deal of dampness in various rooms of the building ; the block floor in the maids sitting room needs re-laying.

There is only one bathroom and I would suggest the provision of an additional one.

2. OBSERVATION BLOCK. Accommodation 7 beds. In this building there are two observation wards, one of which is now used as a nurse's bedroom. The building is also used for patients ready for discharge ; it is unsatisfactory that the observation wards are not available, as such, owing to lack accommodation in the Nurses' Home.

3. SCARLET FEVER BLOCK. Accommodation 24 beds. This building needs re-colouring throughout and the block floors need re-laying in places. The linen cupboard appears to be inadequate.

4. DIPHTHERIA BLOCK. Accommodation 20 beds. The ceilings throughout are cracking and need re-plastering and re-colouring. There is not a bathroom attached to each Ward, and only one W.C. common to males and females.

I would suggest the continuation of the verandah over the whole length of the building on the south side, and the provision of separate W.C.'s and bathrooms for males and females. At present there are two kitchens, and I would suggest further that one of these be converted into a Ward so that there would be provision for males and females for other infections.

5. OUTBUILDINGS. In these buildings are housed the motor ambulance and the disinfector. The remaining rooms consist of laundry, drying and ironing rooms which, in my opinion, are too small.

STAFF. The staff consists of Matron, six nurses, six maids and one extra laundry help.

DIET. The diet, both of patients and the nurses, appears to be quite satisfactory.

I understand that it has already been decided to build an extra block containing 20 beds. This will entail the employment of more nurses and maids and will necessitate extra accommodation for them.

The Hospital is administered and conducted in an efficient manner.

OUNDLE JOINT ISOLATION HOSPITAL.—This Hospital consists of four buildings :—

1. NURSES' HOME. This building was struck by lightning twelve months ago. The ceilings are cracked and the majority of the rooms are damp.

2. SCARLET FEVER BLOCK. Accommodation 8 beds and 4 cots. The inside of this building is in excellent condition, but the outside, which is made of corrugated iron, needs painting.

3. DIPHTHERIA BLOCK. Accommodation 8 beds and 4 cots. This building is in excellent condition.

4. OUTBUILDINGS. These include a coach-house and stable, disinfecting room and laundry ; all are in good condition. The horse ambulance is in perfect condition but provides a slow method of locomotion, and I would suggest a motor ambulance be substituted therefor.

The whole of the Hospital and grounds are kept in excellent condition.

STAFF. The staff consists of Matron, her husband, and one maid.

The following are the number of patients treated in Hospital since 1920 :—

			No. of cases notified in Oundle Urban and Rural Districts. (Scarlet Fever, Diphtheria, Enteric Fever, Cerebro-Spinal Fever, Encephalitis Lethargica)
1920	... 13 cases	1920 ...	... 19
1921	... 16 ,,	1921 ...	... 27
1922	... 7 ,,	1922 ...	... 7
1923	... 4 ,,	1923 ...	... 5
1924	... 14 ,,	1924 ...	... 27
1925	... 27 ,,	1925 ...	... 29
to June, 1926	... 6 ,,	to June, 1926 ...	... 33
	87		147

These numbers indicate that the maintenance of this hospital is not an economic proposition, and I would suggest that arrangements be made whereby other Districts in the neighbourhood may send their cases to this hospital.

TUBERCULOSIS.

NOTIFICATION. During the year an attempt was made to purge the Registers of Tuberculosis Notifications kept in the Public Health Department; the first Register dates back to the year 1913, i.e., the first year in which District Medical Officers of Health were required to send each week a list of Tuberculosis Notifications to the County Medical Officer of Health. Since that time to the end of 1926, 5,454 cases have been notified, and it is safe to assume that a very large proportion of these have died, removed from the district, been cured, or the diagnosis has been agreed by the notifying practitioner to have not been established. Though District Medical Officers of Health were required to send each week this list of all new notifications to the County Medical Officer of Health, they were not obliged to forward, similarly, information as to deaths, removals, cures, etc., neither were returns of Tuberculosis deaths obtained by the Tuberculosis Officer from local registrars until recent years, consequently, the names of many persons who had died, been cured, or had removed, etc., still remained on the Registers of the County Public Health Department. It was on this account deemed advisable to communicate in September with District Medical Officers of Health drawing their special attention to Circular 549 of the Ministry of Health, dated 22nd December, 1924, and more particularly to that part of Section II. which reads as follows :—

> "It will be appreciated that it is of much importance
> "that every District Medical Officer of Health should at
> "once undertake a careful scrutiny of his Register and
> "make any necessary deletions in order to ensure the
> "accuracy of the Register when the first return is made."

(The first return just mentioned referred to the quarter ended March 31st, 1925).

The task of clearing the Registers kept by the District

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

Summary of Notifications during the period from the 3rd January, 1926, to the 1st January, 1927, in the County of Northampton.

AGE PERIODS.	Notifications on Form A.													Notifications on Form B.					Number of Notifications on Form C.	
	Number of Primary Notifications.												Total Notifications on Form A.	Number of Primary Notifications.				Total Notifications on Form B.	Poor Law Institutions.	Sanatoria.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards.	Total Primary Notifications.		Under 5	5 to 10	10 to 15	Total Primary Notifications.			
Pulmonary Males ...	...	2	12	16	20	18	29	19	15	4	2	137	140	...	1	1	2	2	...	39
Pulmonary Females ...	...	1	9	16	25	32	43	19	10	4	...	159	160	...	...	...	...	...	...	32
Non-pulmonary Males ...	1	5	6	7	4	3	4	1	1	...	...	32	32	...	1	...	1	1	...	5
Non-pulmonary Females	1	3	6	6	5	2	6	5	2	1	...	37	37	...	...	...	...	...	...	2
TOTALS ...	2	11	33	45	54	55	82	44	28	9	2	365	369	...	2	1	3	3	...	78
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

The Primary Notifications on Form A. refer to Notifications by Medical Practitioners (other than School Medical Inspectors) of cases not previously notified. (Column 14 includes Primary and Duplicate Notifications.)

The Primary Notifications on Form B. refer to Notifications by School Medical Inspectors of cases not previously notified. (Column 19 includes Primary and Duplicate Notifications.)

The Notifications on Form C. refer to Notifications by Medical Officers of Poor Law Institutions and Sanatoria of patients who were notified before admission.

Medical Officers of Health of all old cases which ought no longer to remain thereon would, no doubt, cause considerable trouble and inconvenience, but once it was accomplished it would be easy to keep the registers up-to-date in the future. Nevertheless, there is reason to believe that most of the District Medical Officers of Health have endeavoured to carry this into effect, and this will be readily seen by comparing the total cases remaining on the Registers kept by District Medical Officers of Health at the end of the year 1926 with the figures for the year 1925, viz., 1,768 as against 2,034. (Assistance was rendered in many instances, by the County Health Visitors, and by the staff of the Public Health Department).

Though some progress has been made it has not been possible to collect the whole of the information now available in the District Medical Officers' Registers for copying into the Registers kept by the County Medical Officer of Health, owing to pressure of work on the clerical staff; it is, however, hoped that this may be accomplished during the current year.

The following Table shows the total number of cases of Tuberculosis remaining on the Registers kept by District Medical Officers of Health, at the end of the year 1926 :—

Pulmonary.			Non-Pulmonary.			
Males.	Females.	Total.	Males.	Females.	Total.	Total Cases.
707	689	1,396	176	196	372	1,768

A copy of the Summary of Notifications as furnished to the Ministry of Health is shown on the Table attached.

The primary notifications of Tuberculosis (all forms) amounted to 368,—172 males and 196 females. Of this number, 298 (139 males and 159 females) suffered from Respiratory forms of Tuberculosis and 70 (33 males and 37 females) from other forms of Tuberculosis. The total notifications, 368, is far higher than the corresponding figure for 1925, which was 292. Table II, facing page 27, shows the cases notified in each District.

MORTALITY. PULMONARY. During the year 1926, 136 deaths, 71 males and 65 females, occurred. Of these, 80 occurred in the Urban Districts and 56 in the Rural Districts.

NON-PULMONARY. 28 deaths occurred, 12 males and 16 females; of this number, 16 occurred in the Urban Districts and 12 in the Rural Districts.

DEATHS FROM ALL FORMS OF TUBERCULOSIS. There were 164 deaths, 96 in the Urban Districts and 68 in the Rural Districts.

Table I, facing page 23, gives the number of deaths and death-rates in the various Districts in the County. The Tuberculosis death-rate for the County as a whole is 0·76 per 1,000 of the population which is the lowest rate on record and compares very favourably with the rate for 1925 which was 0·97.

In the Combined Urban Districts the death-rate was 0·94 and in the Combined Rural Districts 0·60. In the Urban Districts the highest rate was in Desborough and the lowest in Daventry and Raunds. In the Rural Districts the highest rate was in Wellingborough and the lowest in Crick and Oundle.

The following information with regard to the causation of Tuberculosis deaths has been obtained from the Returns of the local Registrars :—

CLASSIFICATION OF TUBERCULOSIS DEATHS OCCURRING IN THE ADMINISTRATIVE COUNTY DURING THE YEAR 1926.

Taken from Returns of Registrars of Deaths.

	Male.	Female.	TOTAL
Lungs	70	67	137
Meninges	4	4	8
Peritoneum and Intestines	4	4	8
Spinal Column	...	...	...
Generalized	3	...	3
Joints	...	1	1
Other Forms	1	...	1
TOTAL	82	76	158

The occupations of the 158 persons mentioned above were as follows:—

CHILDREN.				
UNDER 5 YEARS OF AGE.				
Males.		Females.		
Infant	2	Infant		3
5 AND UNDER 16 YEARS OF AGE.				
Males.		Females.		
School Boy	2	School Girl		4
Nil	1			
	5			7
TOTAL CHILDREN UNDER 16 YEARS				12

ADULTS.					
16 YEARS OF AGE AND UPWARDS.					
Males.				Females.	
Boot Operative:—		Brought Forward	48	Boot Operative.—	
Clicker	10	Gas Works Manager	1	Closer	2
Finisher	8	Grocer	2	Machinist	7
Laster	6	Hardware Merchant	1	Packer	1
Maker	3	Labourer, Bricklayer	1	Cardboard Box Maker	1
Packer	1	,, Engineer's	1	Clerk	1
Baker	1	,, Farm	4	Domestic	7
Boat Builder	1	,, Furnace	1	Housewife	37
Book Binder	1	,, General	4	Lady's Maid	1
Butcher	1	Manservant	1	Nurse	1
Clerk	3	Milkman	1	Piano Teacher	1
Commercial Traveller	1	Painter	1	School Girl	1
Dealer	1	Porter	2	Shop Assistant	1
Drayman	1	Printer	2	Tailoress	4
Engineer	2	Reporter	1	Not Ascertained	3
Ex-Sailor	1	Roadman (U.D.C.)	1	Workhouse Inmate	1
Ex-Soldier	3	School Master	1		
Farmer	2	School Teacher	1		
Gamekeeper	1	Tailor	1		
Gas Fitter	1	Wireless Operator	1		
		Wheelwright	1		
Carried Forward	48				
		TOTAL ADULT MALES	77	TOTAL ADULT FEMALES	69

Of the 158 deaths, 82 or 51·9 per cent. were males and 76 or 48·1 per cent. were females, while of the total number of deaths, 12 or 7·6 per cent. were of children under 16 years of age. Of the 146 adult deaths, 38 or 26·0 per cent. were boot operatives. This figure is significant in view of the percentage of the new patients found suffering from Tuberculosis who were boot operatives, viz., 24·4 per cent.

PREVENTION OF TUBERCULOSIS REGULATIONS, 1925.

In November, 1924, the County Councils' Association were invited to submit observations upon the draft of "The "Public Health (Prevention of Tuberculosis) Regulations" then proposed to be made by the Ministry of Health for the purpose of preventing the employment of persons suffering from pulmonary tuberculosis in occupations in connection with dairies, which would involve the milking of cows, the treatment of milk or the handling of vessels used for containing milk.

Following their consideration of the draft Regulations, the Association expressed to the Minister of Health by resolution their opinion, that in the administration thereof, County Councils and their chief medical officers should have concurrent jurisdiction with the sanitary authorities.

To this resolution the Minister replied that he would be prepared to declare any County Council which applied for the powers to be an authority for enforcing the Regulations.

The County Councils' Association communicated with the various County Councils in November, 1925, giving the result of their negotiations with the Ministry of Health, as set out above.

The Regulations, together with the Association's letter were considered by the Public Health Committee in December, 1925, when the County Medical Officer of Health was instructed to prepare some notes on the subject for their guidance. A Memorandum was prepared by the County Medical Officer of Health and submitted to the Committee in April, 1926, in which he recommended that the County Council should apply for powers to be an Authority for enforcing the above-mentioned Regulations, on the following grounds :—

1. The County Council receives the names of all Tuberculous patients notified in the County and, therefore, are in a better position than District Councils to trace any infection in various Districts to a common source.
2. The County Council employ a Tuberculosis Officer who would be able to take specimens of sputum for examination and also examine any patients, as suggested in the Circular accompanying the Regulations.
3. The County Council employ Tuberculosis Nurses, Health Visitors and School Nurses who would be able to make investigation on their behalf.

The Public Health Committee gave their approval to the recommendations of the County Medical Officer of Health, and the County Council thereupon resolved to apply for the powers to be an Authority for enforcing the Regulations.

The Ministry of Health in June, 1926, issued an Order granting the powers asked for by the County Council. Article 2 of the Order which defines the powers is as follows :—

> So far as may be necessary for the purposes of this order the County Council and their officers shall have all the powers, rights and duties of a local authority under the regulations ; provided that nothing in this order shall affect the powers, rights and duties of any local authority under the regulations.

In the Minister's letter, enclosing the Order, it is stated that "in complying with the application of the County " Council in this matter, the Minister desires me to say that " the Council no doubt recognise that their powers under the " Order should be exercised in close co-operation with the " Sanitary Authorities in the County, and that, before taking " action under Article 3 or Article 5 of the Regulations in any " district, the Council should ascertain what, if any, action " has been or is proposed to be taken by the Sanitary " Authority of the district concerned, in order that full " co-ordination may be secured."

No action by the County Council under the Regulations has been called for during the year.

DISPENSARY WORK.

There are three County Tuberculosis Dispensaries situated at :—

(1) NORTHAMPTON ... 18, Guildhall Road, Northampton.
(Administrative Centre).
9.30 a.m. to 12 noon, Saturdays.
(2) KETTERING ... Lower Street, Kettering.
9.30 a.m. to 3 p.m. Fridays.
(3) WELLINGBOROUGH 108, Midland Road, Wellingborough.
9.30 a.m. to 3 p.m. Wednesdays.
Do. Ultra Violet Light Clinic,
9.30 a.m. to 2 p.m. Mondays.

Tuberculosis Officer :—
J. R. Caldwell, M.B., Ch.B.

TABLE III.

Number of Patients who attended the Dispensaries during 1926.		Number of attendances made at the Dispensaries during 1926.			
		Male.	Female.	Ex-Service.	Total.
NORTHAMPTON ...	263	248	250	97	595
KETTERING	304	534	497	132	1,163
WELLINGBOROUGH ...	532	747	533	324	1,604
TOTAL ...	1,099	1529	1,280	553	3,362

Table III. shows that during the year, 1099 patients visited the 3 Dispensaries and made a total of 3,362 visits, or an average of about 3 visits per patient. This number is exclusive of attendance made by patients for treatment by Ultra Violet Radiation.

Table IV. (facing this page) shows that 329 New patients presented themselves for examination at the Dispensaries for the first time during 1926. Of these, 224 or 68·0 per cent.

TABLE IV.

THE WORK OF THE TUBERCULOSIS DISPENSARIES DURING THE YEAR 1926.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY.				TOTAL.				GRAND TOTAL.	
	Adults.		Children.		Adults.		Children.		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—NEW CASES examined during the year (excluding contacts) :														
(*a*) Definitely tuberculous ...	77	89	21	11	4	8	9	5	81	97	30	16	224	
(*b*) Doubtfully tuberculous ...	2	–	5	2	1	–	–	–	3	–	5	2	10	
(*c*) Non-tuberculous	26	24	23	18	–	2	1	1	26	26	24	19	95	329
B.—CONTACTS examined during the year :														
(*a*) Definitely tuberculous ...	18	18	7	9	–	–	1	1	18	18	8	10	54	
(*b*) Doubtfully tuberculous ...	2	–	2	3	–	–	–	–	2	–	2	3	7	
(*c*) Non-tuberculous	21	41	53	44	–	–	–	–	21	41	53	44	159	220
														549
C.—CASES written off the Dispensary Register as														
(*a*) Cured	19	14	5	7	4	3	–	–	23	17	5	7	52	
(*b*) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ...	47	65	76	62	–	2	1	1	47	67	77	63	254	306
D.—NUMBER OF PERSONS on Dispensary Register on December 31st :														
(*a*) Diagnosis completed ...	316	243	73	65	15	19	27	10	331	262	100	75	768	
(*b*) Diagnosis not completed ...	4	–	7	5	1	–	–	–	5	...	7	5	17	785

1. Number of persons on Dispensary Register on January 1st	660
2. Number of patients transferred from other areas and of "lost sight of" cases returned	7
3. Number of patients transferred to other areas and cases "lost sight of"	29
4. Died during the year	96
5. Number of observation cases under A (*b*) and B (*b*) above in which period of observation exceeded 2 months	17
6. Number of attendances at the Dispensary (including Contacts)	3,362
7. Number of attendances of non-pulmonary cases at Orthopædic Out-stations for treatment or supervision	2
8. Number of attendances, at General Hospitals or other Institutions approved for the purpose, of patients for	
(*a*) "Light" treatment	592
(*b*) Other special forms of treatment (Artificial Pneumothorax).	106

9. Number of patients to whom Dental Treatment was given, at or in connection with the Dispensary ...	None.
10. Number of consultations with medical practitioners :—	
(*a*) At Homes of Applicants	67
(*b*) Otherwise	155
11. Number of other visits by Tuberculosis Officers to Homes	195
12. Number of visits by Nurses or Health Visitors to Homes for Dispensary purposes	3,999
13. Number of	
(*a*) Specimens of sputum, &c., examined	261
(*b*) X-ray examinations made in connection with Dispensary work ...	6
14. Number of Insured Persons on Dispensary Register on the 31st December	295
15. Number of Insured Persons under Domiciliary Treatment on the 31st December	87
16. Number of reports received during the year in respect of Insured Persons :	
(*a*) Form G.P. 17	8
(*b*) Form G.P. 36	142

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TABLE V.

OCCUPATIONAL INCIDENCE OF THE 198 **NEW PATIENTS** FOUND TO BE SUFFERING FROM **PULMONARY TUBERCULOSIS**.

ADULT MALES.		ADULT FEMALES.		CHILDREN MALES.		CHILDREN FEMALES.		TOTAL.
Shoe Operative :—		Shoe Operative :—		School Boy	21	School Girl	11	
Clicker	5	Closer	3					
Finisher	15	Fitter	2					
Laster	7	Machinist	13					
Heel Builder	1	Trimmer	1					
Currier	4	Box Maker	1					
Blacksmith	1	Clerk	2					
Carpenter & Joiner	3	Clothing Machinist	6					
Clerk	8	Corset Machinist	1					
Electrician	2	Domestic Servant	15					
Farmer	1	Hairdresser	1					
,, Poultry	1	Housewife	36					
Gardener	2	Leather Worker	1					
Journeyman Baker	1	Shop Assistant	2					
,, Butcher	1	Teacher Pianoforte	1					
,, Grocer	2	,, School	2					
,, Milk	1	Waitress	1					
Labourer, Builder's	3	Nil	1					
,, Farm	3							
,, General	4							
,, Ironstone	1							
Med. Practitioner	1							
Milkman	1							
Motor Driver	4							
Painter	1							
Tailor	2							
Warehouseman	1							
Works Manager	1							
Adult Males	77	Adult Females	89	Children Males	21	Children Females	11	198

OCCUPATIONAL INCIDENCE OF THE 52 **CONTACTS** FOUND TO BE SUFFERING FROM **PULMONARY TUBERCULOSIS.**

ADULT MALES.		ADULT FEMALES.		CHILDREN MALES.		CHILDREN FEMALES.		TOTAL.
Shoe Operative :—		Shoe Operative :—		School Boy	5			
Clicker	4	Heel Builder	1	Infant	2	School Girl	9	
Finisher	5	Machinist	5					
Laster	2	Box Maker	1					
Elect. Linesman	1	Clerk	1					
Labourer, Builder's	2	Clothing Machinist	1					
,, Farm	1	Domestic Servant	5					
Painter	1	Housewife	4					
Wheelwright	1							
Wood Sawyer	1							
Adult Males	18	Adult Females	18	Children Males	7	Children Females	9	52

OCCUPATIONAL INCIDENCE OF THE **28 PATIENTS** FOUND TO BE SUFFERING FROM **OTHER FORMS OF TUBERCULOSIS.**

ADULT MALES.		ADULT FEMALES.		CHILDREN MALES.		CHILDREN FEMALES.		TOTAL.
Shoe Operative	1	Shoe Operative :—		*School Boy	6	*School Girl	5	
Bus Inspector	1	Machinist	3	Infant	4	Infant	1	
Fish and Poultry Journeyman	1	Gaiter Machinist	1					
		Housewife	3					
Nil	1	Waitress	1					
Adult Males	4	Adult Females	8	Children Males	10	Children Females	6	28

* Including 2 Contacts.

were found to be suffering from definite tuberculous disease, 10 were considered to be doubtfully tuberculous and remained under observation at the Dispensaries, and 95 or 29 per cent. either revealed no evidence of tuberculosis or, after a period of observation, were considered not to be tuberculous.

It shows further that 220 Contacts were examined during the year in addition to the 329 New Patients. Of these, 54 or 24·5 per cent. were found to be suffering from definite tuberculous disease. Seven were found to be doubtfully tuberculous and 159 or 72·3 per cent. were considered not to be tuberculous.

This high incidence of Tuberculosis amongst contacts is significant. It must be realised that these persons are brought to the Dispensary because they have been in contact with a person suffering from Tuberculosis and not because they have manifested any signs or symptoms of the disease themselves. By greater concentration on examination of contacts one can hope to discover patients in the earlier stages of the disease when the chances of cure are greater.

It will be seen that the total number of individuals examined at the three Dispensaries during the year for the first time was 549 as compared with 488 in the previous year. Of these, 333 were adults and 216 were children. In all, 278 new cases of tuberculosis were discovered.

The number of visits made by the Tuberculosis Officer to patients in their own homes during the year, was 262.

Table V. (facing this page) shows the occupations in which the 278 new patients suffering from tuberculosis were engaged. It will be noted that 68 or 24·4 per cent. were engaged in the Boot and Shoe Industry.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

During the year, 52 cases were written off the Dispensary register as cured. In a further 162 the disease was considered as arrested.

Of the 549 new cases who presented themselves for examination for the first time during 1926, 250 were found to be suffering from Pulmonary Tuberculosis, and were placed in the following categories :—

Sputum negative for Tubercle Bacilli	145 or 58 per cent.
,, positive ,, ,, Group I.	25 or 10 ,,
,, ,, ,, ,, ,, II.	36 or 14·4 ,,
,, ,, ,, ,, ,, III.	44 or 17·6 ,,

It will thus be seen that 105 or 42 per cent. of the cases were already advanced or moderately advanced when they first came to the notice of the Tuberculosis Officer.

As it is obvious that the chance of cure materially depends on the stage of the disease when first brought under treatment, it is unsatisfactory that there should be this delay in seeking advice.

There is a general idea that the fault in the delay in diagnosis rests with the General Practitioners, but our enquiries show that this view is largely erroneous. The delay rests in the main with the patient. He either takes a light view of his symptoms, and fails to seek advice in an early stage (carelessness or ignorance) or, being the mainstay of a household, fears that something may be discovered which will necessitate on his part prolonged abstention from work. (Fear).

In order to improve matters in respect of early diagnosis, it will be necessary to go out and look for our cases, and not to await their coming to us. By this is meant that employees in factories and workshops must be regularly examined, and it is likely when the Factory Medical Inspection becomes the duty of the Local Authority, that this will result in an intimate collaboration between the Factory Medical Inspector and the Tuberculosis Officer.

Early diagnosis being the crux of the problem, it is not surprising that continuous search is being made for a short cut to diagnosis. The Radiologist claims that he can diagnose Tuberculosis sooner then the Clinician, but this is not established. The X-ray appearances of Tubercle may be mimicked most closely by various other Non-Tuberculous Conditions ; the variations of the normal compatible with health are so

TABLE VI.

PULMONARY TUBERCULOSIS.

The Classification of the condition of each Patient suffering from Pulmonary Tuberculosis, as noted at the last examination during the year 1926.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1926.					1926.				
				Class T.B. minus.	Class T.B. plus.				Class T.B. minus.	Class T.B. plus.			
					Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).		Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
Alive.	Discharged as cured.	Adults.	M.	16	2	1	...	3	...	...	...	...	...
			F.	14	...	...	...	...	...	...	...	...	...
		Children.	M.	4	1	...	...	1	...	...	...	...	...
			F.	6	1	...	...	1	...	...	...	...	...
	Disease arrested.	Adults.	M.	53	3	4	...	7	...	...	...	...	...
			F.	44	1	3	...	4	...	...	...	...	...
		Children.	M.	14	...	...	...	...	...	...	...	...	...
			F.	18	...	...	...	...	...	...	...	...	...
	Disease not arrested.	Adults.	M.	69	26	74	9	109	45	11	16	6	33
			F.	51	8	39	8	55	47	14	15	13	42
		Children.	M.	30	1	1	...	2	27	...	...	...	...
			F.	23	1	3	...	4	20	...	...	...	...
CONDITION NOT ASCERTAINED DURING THE YEAR.													
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER.				14	4	1	2	7	...	...	...	...	...
DEAD.		Adults.	M.	3	3	15	13	31	1	...	3	13	16
			F.	2	...	8	10	18	4	...	2	12	14
		Children.	M.	...	...	1	...	1	1	...	...	...	...
			F.	1	...	...	...	...	...	...	...	...	...
Totals		...	...	**362**	**51**	**150**	**42**	**243**	**145**	**25**	**36**	**44**	**105**

wide; the exquisite definition of the modern Radiogram showing, as it does, normal lung structure, has merely added to the confusion. Other Radiologists making lesser claims, point out that with the aid of the X-rays it is possible to obtain a much better conception of the extent of the disease. They assume that they are able accurately to decide between what is active and what is healed. This, as a rule, is incorrect, and were we to found our prognoses on the Radiologist's findings we should go hopelessly astray.

Attempts have been made to elaborate tests comparable to the Wassermann reaction, but the universality of tuberculosis infection places such tests in much the same category as Tuberculin in diagnoses, that is to say, their use is of a negative character, or at best, they may tip the balance of probability in one or other direction.

We must still rely absolutely on the old-fashioned methods of percussion and auscultation, though it is much to be regretted that the attractive short cuts via the Radiologist or the Pathologist are steadily rendering the hum-drum, but reliable, methods of the older physicians a lost art. This tendency is crystallised in the reply of a student at a recent final examination to the question "How would you diagnose a Hydrothorax?" Without hesitation came the reply, "By X-ray."

We may divide the methods of diagnosis into two groups, viz.:—I. Essentials; II. Adjuvants. In the order of importance.

I. Essentials. (a) Physical signs with emphasis on percussion.
  (b) Symptoms and History.

II. Adjuvants. (a) Sputum examination.
  (b) X-ray examination.
  (c) Tuberculin and Serological tests.
  (d) Red cell sedimentation tests, differential and Nuclear blood counts. (Arneth).

IN THE LABORATORY.

During the year 261 specimens of sputum were examined for the presence of Tubercle Bacilli, and of this number 86 were positive and 175 negative.

In addition, five specimens of urine were examined bacteriologically, and one specimen of Cerebro-spinal fluid.

In 15 specimens of blood, differential counts (Arneth), have been made.

Autogenous Vaccines to combat the secondary infections of pulmonary tuberculosis have been prepared in three cases.

A series of comparative tests of the relative value of Ziehl Neelsen method of staining for Tubercle Bacilli and Thistlewhaite's modification of Serkowski's test have been made. Our conclusions are that, although the process involved in the second test is longer, the facility with which the Bacilli can be detected is much greater.

In a series of films examined, the second test showed on an average, about four times as many Tubercle Bacilli, and in 20 sputa, found negative by Ziehl Neelsen, Bacilli were found in two. It has also been shown that when using the Serkowski method combined with careful selection of the portion of sputum, there is no advantage to be gained by concentrating the sputum as in the antiformin method.

DISPENSARY TREATMENT OF NON-PULMONARY TUBERCULOSIS.

Simple Tuberculous Adenitis of the neck or other glands with induration or enlargement but no fluctuation is treated at the Dispensaries by Ultra Violet Radiation. In some cases the weekly local inunction of Philip's graded Tuberculin suffices to cure the condition.

Where breaking down and fluctuation have occurred, Calot's methods of puncture aspiration and injection are employed. When sinuses are present Ultra Violet Radiation treatment is the best.

The modern treatment of Non-Pulmonary Tuberculosis yields brilliant results. Major operative interference is becoming obsolete. Granted early diagnosis and treatment the outlook in most cases is favourable.

A few days delay in securing the admission of Non-Pulmonary cases to special hospitals may vitally affect the prognosis. It cannot be too strongly urged that for Non-Pulmonary Tuberculosis there should be no "Waiting List."

DISPENSARY TREATMENT BY ULTRA VIOLET RADIATION.

The health-giving properties of the sun were recognised by the ancient philosophers, while Aristotle in 300 B.C. noted the effect of daylight in producing green colouring matter in vegetables. It was not, however, until the seventeenth century that any real scientific advance in our knowledge of light was made, when Newton demonstrated the Spectrum. His observations, however, did not extend beyond the Spectrum of the visible rays of the sun. It was in 1800 that Herschel and Ritter demonstrated that radiations existed above and below the visible spectrum. Since that time much valuable work with regard to light has been done and among the names which are pre-eminent are Professor Rontgen, who discovered the X-ray and Dr. Finsen who is the founder of modern Heliotherapy.

Light is due to an electric magnetic disturbance of the ether, and the sensation of light is due to a series of minute waves in the ether. These waves can be measured, and vary in length. Each length corresponding to a definite colour. The shortest wave gives a sensation of violet and the longest a sensation of red. A beam of white light can be analysed by passing it through a prism which bends the waves of varying length through varying angles and so produces the visible spectrum. The visible spectrum consists of (starting from the shortest wave on the left) Violet, Indigo, Blue, Green, Yellow, Orange, and Red. The visible spectrum, however, forms but a small part of the total light waves. To the left of the violet area occur rays of shorter wave length, the ultra violet rays, while beyond these occur the X-rays and the

Gamma Rays (emitted from Radium). Beyond the red end of the visible spectrum occur rays of longer length—the Infra Red rays—which generate heat when their energy is absorbed. Below the Infra Red area come the comparatively long waves used in Wireless Telegraphy or Hertzian waves. Light waves travel at about 186,300 miles per second.

Invisible.			Visible.							Invisible.	
Gamma Rays.	X-Rays	Ultra-Violet Rays.	Violet.	Indigo.	Blue.	Green.	Yellow.	Orange.	Red.	Infra Red (Heat.)	Hertzian (Wireless)
(Chemical Rays).			(Light).								

Short Waves. <—————— ——————> Long Waves.

It is with the Invisible Ultra Violet Rays only that we are at present concerned.

There are two sources of Ultra Violet Rays.

1. Natural. Sun Rays.
2. Artificial. Produced by Electrical Mechanism.

The curative effect of sunlight on disease is known largely to be the result of the Ultra Violet portion of the Solar Spectrum. The actual amount of Ultra Violet reaching the earth varies in different localities. In most industrial areas of Great Britain the amount available is minute ; the bulk being filtered off and lost by moisture, smoke and dust in the upper atmosphere. Hence there has arisen a demand for alternative sources of supply and these now are legion. In choosing an alternative source of Ultra Violet Rays the manufacturers generally advise one to select a lamp, the spectrum of which most closely resembles that of the Sun. This is not really the criterion at all. In treating disease by actual Sunlight or Heliotherapy we expose the patient to a multitude of influences. Heliotherapy is, in fact, very like the old fashioned shot gun prescription, it contains many ingredients, some of which may be helpful. There are Light Rays, Infra Red Rays, Ultra Violet Rays, etc., and, in addition, there is the cooling effect of the air on the skin, the varying humidity and temperature all of which stimulate and exact a response. Indeed to these adventitious conditions Prof. Leonard Hill is inclined to ascribe as much importance as to the Solar Radiations themselves.

In any comparison of artificial sunlight with natural Sunlight one has to take other factors into consideration.

If Sunlight treatment is given at health resorts in the Alps, there can be no doubt that it is far preferable to artificial Sunlight treatment given in a smoky city, since the purity of the mountain air and the dry atmosphere have to be taken into consideration.

To those of us, however, who are unable to visit these resorts the artificial Sunlight lamps will prove a very admirable substitute. This is especially the case in a climate such as ours which can at least be described as changeable and unreliable.

There are some great advantages in the artificial Sunlight lamp over the natural Sunlight. Natural Sunlight is not always available and, even if it were, in our foggy and smoky cities before reaching earth it is robbed of a great deal of its Ultra Violet Rays by absorption. Another advantage of artificial light is that Ultra Violet Rays can be measured and one is able to regulate the dosage given.

While no one can doubt the great benefits from artificial Sunlight, yet a word of warning should be given to would-be private users of artificial Sunlight lamps. Artificial Sunlight must be administered with care and discrimination. While the sun by means of its heat warns us against over dosage, no such warning is given in Ultra Violet treatment. It is not advisable to allow the County Council lamps to be used for the treatment of Lupus other than by qualified and experienced officers.

The criterion of a good lamp is its ability quickly and safely to produce an Erythema, or Sunburn. It is on the skilful management of the Erythema that success depends.

Some of the lamps on the market to-day will not produce Erythemata at all. In others, the input of energy is out of all proportion to the output of Rays.

The Tungsten Arc and the Mercury Vapour Lamp represent maximum output for minimum cost, and for this reason the Public Health Committee equipped the Dispensary at Wellingborough with Mercury Vapour Lamps.

Actually the spectrum of the Mercury Vapour Lamp is only a very distant relative of the Solar Spectrum, but its Erythema producing powers are very high.

The underlying basis for the curative action of Ultra Violet Rays is not clearly understood. It is possible with a mustard poultice to produce an Erythema, followed by pigmentation, but no one suggests that by this means we can produce the effect of Radiation treatment. Certain facts are known. The ability of the body to metabolise Calcium, Phosphorus, etc., is increased by radiation, and to this in part, is no doubt due the beneficial effects of Radiation on Rickets. It is also known that such substances as Cholesterol normally possessing no antirachitic powers develop these if irradiated. As Cholesterol occurs in the human skin, this may also in part explain the beneficial action of Radiation in preventing, or curing Rickets. Then, following irradiations, the bactericidal powers of the blood are raised. We must regard the skin as possessing, not merely a mechanically protective function, but, in addition as possessing the special function of producing Antibody in a high degree.

This function is well shown in infectious diseases. Thus it is an old saying, that after a good rash, the patient suffering from an infectious disease such as Measles or Scarlet Fever usually gets well rapidly.

We suggest that the rash is an attempt on the part of nature to flood the skin with toxin, in order to stimulate its antibody producing powers.

The rash of all infectious diseases may safely be presumed to contain the causative organism, since in such diseases as Cerebro-spinal Fever, Typhoid, etc., the organism can be isolated from the rash.

It is possible that this theory may in part explain the beneficial effects following the irradiation of the whole body, since such irradiation being followed by Hyperæmia would flood the skin with any toxin present.

The primary effect of the irradiation is the production of an Erythema or Sunburn, and this in due course is followed by pigmentation. This Erythema appears to be followed by a negative phase comparable to that following treatment by vaccine, and during this phase of diminished resistance the dose should not be repeated.

Our experiments with groups of children tend to show that as far as Mercury Vapour Lamps are concerned, the best progress is made with minimum intervals of one week. The blonde skin often manifests extreme sensitiveness to irradiation, and severe blistering reactions are the result. In such cases great caution should be exercised, and the interval between doses should be much greater.

The pigmentation which follows the Erythema is protective in nature, and by and by this deepens to such an extent as to prohibit further Erythemata. When this state of staleness has been reached, the patient should be rested for six weeks.

It is frequently stated that non-pigmenters do badly, but this is far from being an absolute rule as the following case will illustrate :—

P.F., age 9, of Tuberculous stock and typical Tuberculous Diathesis, a blonde, had been attending our Dispensary at Northampton for many months. During the period of observation he showed no obvious Tuberculous Focus, but he failed completely to gain in weight. He was at first given weekly irradiations towards which he manifested severe reactions and marked loss in weight. The interval between doses was, therefore, increased to two weeks and the increase in dosage was very slow. Under this regime he improved very steadily, gained 8 lbs. in weight, and was able to return to school after an absence of several years.

At the Wellingborough Dispensary we are equipped with two lamps.

One is of the Jesionek air-cooled Mercury vapour type consuming 4 ampéres on 220 volts, and this lamp is used for general irradiation of the whole body. Each patient is given a test dose of 2—3 minutes at 3 feet, and his subsequent dosage is based on the resulting Erythema. If severe, the same dose is repeated until tolerance is established. At weekly intervals, except in ultra sensitive skins, the irradiation is repeated, our endeavour being to keep the skin in a state of reaction and rest, alternating. When Erythemata are no longer possible, the patient is given 6 weeks rest. Thereafter the cycle is recommenced.

The other is the Kromayer water-cooled lamp, consuming 4 ampéres on 220 volts. This lamp is used for the treatment of local conditions such as Lupus Vulgaris, Tuberculous Adenitis, Sinuses, Keloid, etc. In our experience insofar as Tuberculous conditions are concerned the watchwords for the Kromayer lamp are "Be bold." With this lamp it is possible to produce reaction varying from a mild hyperæmia of the part to severe blistering and destruction of tissue. A variety of quartz applicators are used in conjunction with this lamp and these are of a wide range of usefulness in directing the rays into cavities, such as the nose, mouth larynx, etc.

All the cases treated are tuberculous and on analysis they may be subdivided as follows :—

Lupus Vulgaris	9 cases
T.B. Cervical Adenitis with either discharging sinuses, keloid, or scrofulodema	4 ,,
Tuberculides	2 ,,
Pulmonary tuberculosis	6 ,,
T.B. Arthritis of Knee Joint	1 case
T.B. Abdomen	2 cases

In addition to those already enumerated a further group of 14, labelled Pre-tubercular, have been under treatment In all the cases coming under this head the following conditions obtain :—

1. There has been a history of exceptional exposure to tuberculosis infection.

2. In addition to (1) these children either present the stigmata of tubercle or they are debilitated, anæmic or marantic, or they have failed to recover completely from such debilitating conditions as Measles or Whooping Cough.

GENERAL OBSEBVATIONS ON THE RESULTS OF ULTRA VIOLET RADIATION THERAPY, ETC.

In cases of Lupus Vulgaris both local and general treatment have been given, the actual lesion usually being covered during the General Light Bath. The results we have obtained even in four months have greatly exceeded our expectations. Definite improvement is obvious in all the cases under treatment; startling improvement in several. In our experience the improvement is most rapid in the ulcerative varieties. The dry, nodular varieties are resistent and much slower.

To quote three illustrative cases :—

" M. M., age 25, duration of disease 11 years, entire face and nasal mucosa involved, also T.B. Dactylitis of thumb with discharging sinus. Treatment four months. Nasal mucosa apparently healed, facial result excellent, sinus on thumb soundly healed. Total weight gain, 6 lbs. Much brighter mentally, eats and sleeps well, " No longer ashamed to go out."

" G. S., age 11, duration of disease 9 years, lupus vulgaris 9 years, right cheek. Under treatment four months, lesion vastly improved, general condition excellent, weight gain 6 lbs."

" P. B., age 17, duration of disease 3 years, nose and nasal mucosa affected. Treatment four months, nose perfectly healed, nasal mucosa shows no sign of disease, weight gain, 6 lbs."

The most dramatic results are seen in cases of discharging sinuses in connection with various tuberculous conditions.

"Mr. M., age 26, T.B. Cervical adenitis, discharging sinus, duration of disease 1 year, treatment three months, sinus healed and scar negligible, gland has undergone fibrosis and is palpable but no longer visible, general condition good, weight gain, $2\frac{1}{2}$ lbs."

"N. L., age 13, discharging sinus with ugly keloid, duration of disease 18 months, treatment one month, soundly healed, cosmetic result good, general condition excellent, weight gain, nil."

Tuberculides respond best to general treatment. Local applications are unnecessary.

"A. F., age 34, Pulmonary tuberculosis, physical signs of extensive lung tubercle, Sputum T.B., Tuberculides of both cheeks, in Sanatorium 13-11-'25 to 14-5-'26. On discharge, physical signs still abundant, sputum still positive, weight stationary. The Tuberculides showed no improvement with the Kromayer lamp. As he had active Pulmonary Tuberculosis, treatment with the Jesionek Lamp was begun very cautiously, improvement was rapid and immediate, after three months treatment facial lesions greatly improved, chest disease quiescent, sputum negative for T.B., weight gain, 6 lbs. Is going to start work.

Owing to the conflicting results obtained in the treatment of Pulmonary Tuberculosis by Light, we have restricted such treatment to only a few cases, and these really provide an unfair test for the method, as, with one exception, all show advanced or moderately advanced disease.

The case outlined above, however, suggests that careful selection may reveal a field of usefulness for this method. One case definitely deteriorated and treatment was discontinued. Two cases show quite definite improvement, and the following may be used as an illustration :—

"C. W., age 19, refused Sanatorium treatment, left upper lobe and apex of left lower lobe involved, sputum T.B.+

under treatment four months, general condition greatly improved, weight shows no change, chest condition shows slight percussion dulness only at the left apex, no adventitious sounds, no sputum, eats well, etc., and is anxious to start work."

Regarding Light Treatment in Pre-tuberculous cases, it is obvious that a considerable period of time will have to elapse before any claims can be made. In common with others, however, we can confirm the fact that such treatment is followed by improvement in the general health and well-being of patients. An increased capacity for mischief is frequently noted by mothers and is a fairly reliable index of increased metabolic activity. These cases, 14 in number, were chosen for this form of treatment because they were either losing weight or failing to gain any as children should.

During four months treatment, although there was a total gain in weight of 23 lbs. as against a loss in one case of 4 lbs. the tendency to gain weight was not marked.

SUMMARY.

1. Sinuses in connection with T.B. Lymphomata, etc., respond to Ultra Violet Radiation Treatment in a striking manner.

2. The results in the treatment of Lupus Vulgaris are most promising. The ulcerative varieties respond most rapidly. The effect on the patient's health is most marked. Weight gains varying from 2 lbs. to 8 lbs. have been recorded in the short space of four months.

3. The pre-tuberculous group shows distinct improvement in general health and mental brightness, and children hitherto stationary, or actually losing weight, show a definite gain. Many years must, however, elapse before any claims can be made respecting the effect of Ultra Violet Radiation in preventing the development of Tuberculosis.

4. With regard to Pulmonary cases, much wider and more prolonged experience with this form of treatment will be

necessary before assessing its value, as in a chronic disease which without special treatment is liable to show ups and downs it is impossible to assert whether improvement is due to treatment or not.

TREATMENT OF PULMONARY TUBERCULOSIS.

Although many methods of treating Pulmonary Tuberculosis have been tried, two only have proved reliable :—

(1) The Sanatorium method, introduced by Boddington in 1840.

(2) Treatment by Artificial Pneumothorax, first suggested by Dr. Carson over a hundred years ago.

In respect of Northamptonshire County Council patients, there were 62 patients in Rushden House Sanatorium at the commencement of the year 1926, the number admitted was 118 and the number discharged 118, leaving 62 remaining in the Institution at the end of the year. In addition, one Ex-service Pensioner, who was admitted to Brompton Hospital during 1925 for treatment by Artificial Pneumothorax, was discharged during 1926.

The immediate results of treatment of all patients (including London County Council, &c.) discharged from Rushden House Sanatorium during the year 1926, are shewn in Table VII. facing this page.

The average period in Sanatoria during 1926 was 191·3 days per patient. The old idea of " 90 days " treatment in Sanatorium (popularised by the National Insurance Acts) finds no place in this County.

It is frequently suggested that in the treatment of Pulmonary Tuberculosis there should be no waiting list for sanatoria, and that the number of beds should be sufficiently to render this unnecessary. Experience shows, however, that where the waiting list for Sanatoria is small or non-existent, the tendency is for the Sanatorium to become filled with unsuitable cases. As far as male and female adults are

TABLE VII.

ANNUAL RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF ALL PATIENTS DISCHARGED FROM RUSHDEN HOUSE SANATORIUM DURING THE YEAR 1926.

	Classification on Admission to Institution	Condition at time of Discharge	Duration of Residential Treatment												
			Under 3 Months			3 to 6 Months			6 to 12 Months			More than 12 Months			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	Total.
PULMONARY TUBERCULOSIS	Class T.B. Minus.	Quiescent	2	...	...	6	3	...	1	5	3	...	...	5	25
		Improved	6	5	1	7	7	1	1	3	3	...	...	1	35
		No Material Improvement	1	...	...	...	1	...	...	...	...	...	...	...	2
		Died in Institution ...	...	...	...	...	...	1	...	...	...	...	...	...	1
	Class T.B. plus Group 1.	Quiescent	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	1	2	...	1	1	...	...	...	...	...	...	...	5
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Class T.B. plus Group 2	Quiescent	...	...	...	3	1	...	3	...	...	...	...	...	7
		Improved	3	3	...	8	8	...	1	6	...	...	...	...	29
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Class T.B. plus Group 3	Quiescent	1	...	...	...	...	...	...	...	...	...	...	...	1
		Improved	1	2	...	9	7	...	7	5	...	1	...	1	33
		No Material Improvement	1	...	...	2	...	...	...	...	...	...	...	...	3
		Died in Institution ...	...	...	...	...	...	...	1	...	...	...	...	...	1
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	...	...	...	...	...	...	...	...	...	...	...	...	...
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abdominal	Quiescent or Arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	...	...	...	...	...	...	...	...	...	...	...	...	...
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Organs.	Quiescent or Arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	...	...	...	...	...	...	...	...	...	...	...	...	...
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Peripheral Glands.	Quiescent or Arrested ...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	...	...	...	...	...	...	...	...	...	...	...	...	...
		No Material Improvement	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Under 1 week.			1 to 2 Weeks.			2 to 4 Weeks.			More than 4 Weeks.			
	Observation for purpose of diagnosis.	Tuberculous	...			...			...			...			...
		Non-Tuberculous	...			...			...			...			...
		Doubtful	...			...			...			...			...

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concerned, the state of affairs during 1926 has been most satisfactory, the average waiting period being 5½ weeks and 4 weeks respectively. In the case of children, however, the position was the reverse to that of adults, the average waiting period for male children was 20 weeks and for female children 17 weeks. While it is desirable to allow each child one year in sanatorium, in view of the above, it is advisable to curtail the period of residence, especially in those cases which show rapid progress. There is, however, an alternative procedure of boarding-out town children for a few months after discharge with selected country families, under supervision. This, a modified "Grancher" system, has been adopted with great success by the Hastings Health Committee at a weekly cost per child of 7/-.

TREATMENT BY ARTIFICIAL PNEUMOTHORAX.

The treatment of Pulmonary Tuberculosis by Artificial Pneumothorax was first recommended by James Carson, of Liverpool, nearly a century ago. The elasticity of the Lung had then, for the first time, been recognised. Thereafter, various physicians in this country noted a tendency to recovery in advanced cases complicated by spontaneous Pneumothorax, The operation, however, was not seriously practised until about the year 1880, and credit is due to Forlanini, Potain and Murphy, for having placed this treatment on a solid foundation.

The operation is now in constant use in all civilized countries. While many methods of treatment have been applied for cases in the early stages of the disease, pneumothorax is the only hopeful treatment for the advanced consumptive. When every sign and symptom points to a rapid and fatal conclusion, this method of treatment is often successful.

The natural elasticity of the lung, its constant condition of extension, and its constant movement, offers a great barrier to the fundamental principle of resting an inflamed organ. We may regard the lung as an elastic hollow organ, with an internal pressure equal to atmospheric, suspended and free in a cavity with an internal pressure less than atmospheric.

The cavity is the chest, and the lung follows every movement of the chest wall, and, in fact, what we call the pleural space has really no actual existence. It is a potential space and will only become an actual space when its internal pressure approximates to atmospheric.

The introduction of a large amount of air within the pleural space, as by a penetrating wound of the chest wall, is followed by complete collapse of the lung, if there be no adhesions to prevent such collapse.

In Pneumothorax Treatment we introduce graduated amounts of air or nitrogen, controlling our actions by the use of a manometer registering pleural pressure.

The ideal Pneumothorax is known as selective, the collapse is incomplete and the intra pleural pressure with inspiration is always left at less than atmospheric. As Parry Morgan has shown, under such conditions, the air or gas introduced collects over the diseased areas, immobilising these, while leaving it possible for some lung function to take place, in healthy tissue.

The effects of Pneumothorax Treatment are not entirely mechanical. More subtle serological effects are also at work.

During 1926 seven cases have been treated by this method. All were very advanced, and the operation was a last resort. In one the pleural space was completely obliterated and the operation was impossible. In a further two, serious adhesions prevented a useful collapse. In three, the results have been good. In the remaining case benefit has accrued.

As illustrating the benefit to be derived from a partial collapse, the case of " A. S." may be cited.

This patient, a young adult, when first seen was seriously ill; his temperature 104°, repeated small hæmoptyses, emaciation extreme, widespread disease throughout the right lung, sputum T.B.+++. The amount of collapse, brought about by Pneumothorax Treatment, was shown by X-ray to be slight. Nevertheless, improvement was immediate, and at the time of writing the patient is now at work. He has gained over one stone in weight. His sputum is Tubercle-free. The physical signs are slight, and ultimate complete cure is probable.

In a second case, a young adult female, suffering from very extensive left-sided disease, the progress has been most satisfactory. The sputum is Tubercle-free and the patient has returned to work.

The remaining case, an adult male, has gained 10 lbs. in weight, and the physical signs have receded. The sputum, however, is still positive.

As a purely Dispensary procedure, the treatment of numbers commensurate with the importance of the method is impossible. The ideal way to utilise Artificial Pneumothorax Treatment is for the initial stages of the operation to be carried out in the Sanatorium or the Hospital, and for the Dispensary to be used for refills after an adequate degree of collapse has been obtained.

TREATMENT OF TUBERCULOSIS IN INSTITUTIONS.

A. PULMONARY TUBERCULOSIS.

RUSHDEN HOUSE SANATORIUM.

During the whole of the year 1926, 70 beds have been available for patients at the Sanatorium. These beds were allocated as follows :—60 beds for patients from the area of the County, 2 beds for Ex-Service men, 6 beds (3 male and 3 female) for London County Council patients and 2 beds for paying patients and emergencies. An average of 67 beds has been occupied during the year.

A new residence for the Medical Superintendent is in course of erection, and should be completed early in the new year.

As heretofore, patients on admission are classified in accordance with Memorandum 37T into Class T.B. minus, and Class T.B. plus Groups 1, 2, 3. The returns showing (1) the classification of immediate results on discharge (2) the average number of beds available for patients and (3) the extent of Residential Treatment, are also in accordance with this Memorandum.

CLASSIFICATION OF PATIENTS ADMITTED DURING 1926.

	Males.	Females.	Children.	Total.
*Class T.B. minus ...	25	28	15	68
**Class T.B. plus :				
Group 1 ...	5	2	...	7
Group 2 ...	20	17	...	37
Group 3 ...	16	14	1	31
Non-Pulmonary ...	...	...	...	...
TOTAL	66	61	16	143

* Class T.B. minus—
Cases in which tubercle bacilli have not yet been demonstrated in the sputum; such cases are transferable to T.B. plus if and when the bacilli are found.

** Class T.B. plus—
Cases in which tubercle bacilli have been demonstrated. Grouped to indicate (1) slight, (2) marked, (3) profound systematic disturbance.

AVERAGE NUMBER OF BEDS AVAILABLE FOR PATIENTS DURING THE YEAR 1926.

	Observation	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total.
		" Sanatorium" Beds.	"Hospital" Beds.	Disease of Bones & Joints	Other Conditions.	
Adult Males ...	...	21	7	...	...	28
Adult Females ...	...	21	7	...	...	28
Children under 15	...	14	...	...	...	14
TOTAL ...	...	56	14	...	...	70

No beds are actually kept for observation cases, but accommodation can be made for such cases when required.

In the following Table is set out the occupations, in which patients are stated to have been employed immediately prior to admission.

Occupation.	Males.	Occupation.	Females.
Boot and Shoe Operative	24	Boot and Shoe Operative	13
Currier	4	Cook General	5
Fitter and Turner	1	Domestic Servant	8
Baker	1	Clothing Worker	4
Labourer	5	Housewife	16
Carpenter	2	Shorthand Typist	2
Dandy Roll Maker	1	Clerk	2
Railway Fireman	2	Teacher	2
Painter	3	Box Factory Worker	1
Window Cleaner	1	Draper's Assistant	1
Wheelwright	1	Corset Factory Worker	1
Draper's Assistant	1	Untrained Nurse	1
Lorry Driver	1	Machinist (Fancy Bags)	1
Butcher's Assistant	1	Packer (Factory)	1
Chauffeur	1	Book Keeper	1
Legging Worker	1	Waitress	1
Grocer's Assistant	2	School Girl	7
Milk Van Man	1		
Clothing Worker	3		
Gardener	1		
Soldier	2		
Marine Store Dealer	1		
Export Packer	1		
Vegetable Porter	1		
Waiter	1		
Ironstone Miner	1		
Chauffeur Gardener	1		
Platelayer (Railway)	1		
Telegraphist	1		
School Boy	9		
Total	76	Total	67

It should be noted that of the total patients (143) 37 or 25.8% were Shoe Operatives.

Graduated Exercise.—This has been carried out as heretofore, the work being divided up into five grades, with coloured cards for each grade. The Medical Superintendent grades each patient according to his or her fitness for a particular grade, and all work and exercise is carried out directly under his supervision.

GARDENING AND AGRICULTURE.—Under the direct supervision of the Medical Superintendent, those patients who are fit receive regular instruction from the gardener. Every endeavour is made to make the patients take an interest in their work, and it is gratifying to see how much they benefit both in health and technical knowledge. Instruction is given in the two hothouses, two gardens, two orchards and other grounds around the Sanatorium.

Special demonstrations in pruning, grafting and spraying of fruit trees and in grading and packing of fruit are given by the County Horticultural Superintendent and the gardener. The gardens produce more fruit and vegetables than is required for the use of the Sanatorium, and the surplus is sold, and, in addition, a fair proportion of the potatoes required is grown.

POULTRY AND PIG FARMING.—The gardener continues to give useful instruction in the rearing, feeding and general care of fowls, an incubator and rearer being kept for this purpose. During the year a special lecture was given by an instructress from the County Model Farm. It has been found possible to keep the Sanatorium supplied with eggs and to sell some outside. Instruction is also given in pig keeping.

JOINERY, CARPENTRY AND PAINTING.—Nothing of a skilled nature is undertaken, but regular instruction is given by the "handy man" and by any skilled workman who may happen to be undergoing treatment in the Institution. A workshop adequate to the purpose exists. With the help of the "handy man" the patients assist in general repairs and work around the Sanatorium, such as painting, carpentry and glazing, and have done very useful work during the year.

BOOT REPAIRS.—A set of shoemaker's tools is provided and patients make good use of these in repairing their own boots and shoes.

SCHOOL.—The Medical Superintendent has again received most useful help during the year in the instruction of children, from three women patients. These women, one of whom was a teacher employed in the County, had no sputum.

Most useful and willing assistance has been given by adult patients, both male and female, in the upkeep of the paths, lawns and grounds generally.

The admission and discharge of patients is notified on forms C and D to the Medical Officer of Health of their district, and also to the County Medical Officer of Health on special forms. The admission and discharge of children is notified to the Local Education Authority by the County Medical Officer of Health. Notification of all discharges is made to the Northamptonshire Nursing Association, the County Councillor for the district in which the patient resides, and to local social service leagues, etc. (if any) by the County Medical Officer of Health.

All patients before being discharged from the Sanatorium, receive printed instructions to report to the Tuberculosis Officer at the nearest dispensary before returning to work or school. The Medical Superintendent encourages all ex-patients to keep in touch with him and many do so either by letter or in person.

VITA GLASS.—The Sub-Committee considered the advisability of substituting vita glass for the ordinary window glass in the children's ward. (Early in the current year vita glass was supplied.)

Vita glass was invented by F. C. Lamplough, M.A. Ordinary glass used in windows while allowing the passage of some Ultra Violet rays yet absorbs some of the rays of shorter wave length which are essential for health. Vita glass contains a certain quantity of quartz which allows for the passage of Ultra Violet rays of various wave lengths. It has been used in certain schools and also in the London Zoological Gardens. The results of its use have been most promising.

(For further information on Ultra Violet rays see page 49 of Report).

The Sanatorium again exhibited fruit at the annual County Agricultural Show and improved on the record of last year, although it was a poor year for fruit. Six prizes, in addition to a Silver Cup, presented by the "Northampton Echo" and the special "Carbokrimp" prize were won. The patients took a great interest both in the preparation of the exhibits and in the results.

Friends in the County, including ex-patients, continue to take a keen interest in the Sanatorium, and keep it well supplied with books, magazines, toys, etc. An additional loud speaker has been presented for the wireless set.

It is hoped during the coming year to make a small bowling green in front of the administrative block.

It is gratifying to note that the Farm and Garden has been run at a profit each year since the opening of the Sanatorium.

RESULTS OF SANATORIUM TREATMENT.

On the suggestion of the Chairman of the Public Health Committee enquiries were made as to the condition of patients after discharge from Sanatorium.

Rushden House Sanatorium was opened in September, 1921.

Enquiries have been made of the first 300 patients treated there who were discharged between 1922 and 1925.

From the attached Tables certain important information as to the effects of Sanatorium treatment on patients at different ages and stages of the disease has been obtained.

On perusal it will be seen :—

1. The immediate or Sanatorium deaths were 8 in number or 2·7 per cent. of the cases admitted ; these deaths occurred amongst patients in the most advanced stage of the disease, and represent a percentage of 15·1 of the cases admitted in this stage.

2. 68 deaths occurred after leaving Sanatorium, or 22·7 per cent. of the total admissions. 41 or 77·35 per cent. of the cases admitted in the most advanced stages of the disease, died.

3. The total deaths amounted to 76 or 25·3 per cent. of the patients admitted.

TABLE VIII.

Classification of the first 300 Patients who received Treatment at Rushden House Sanatorium. Discharges took place between 1922 and 1925, and represents the Condition of the Patients at the end of the Year 1926. Average Period of Sanatorium Treatment—210 Days per Patient.

Class.	Classification on Admission.		Well and Working.		Physical Signs and Working.		Unfit to Work.		Died in Sanatorium.		Died Since.		Removed from Area.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Class T.B. Minus ...	133	44·3 %	108	81·2 %	9	6·76 %	1	·75 %	...	...	11	8·27 %	4	3·0 %
,, T.B. Plus Group I.	53	17·7 %	11	20·75 %	35	66·03 %	3	5·66 %	...	...	...	...	4	7.54 %
,, T.B. Plus Group II.	61	20·3 %	1	1·63 %	17	27·86 %	23	37·70 %	...	...	16	26·23 %	4	6·56 %
,, T.B. Plus Group III.	53	17·7 %	...	...	...	...	4	7·54 %	8	15·1 %	41	77·35 %	...	...
Total ...	300	100 %	120	40 %	61	20·3 %	31	10·3 %	8	2·7 %	68	22·7	12	4·0 %

TABLE IX.

Deaths which occurred among the First 300 Patients discharged from Rushden House Sanatorium Classified according to Age Groups, and Sub-Divided according to Stage of Disease.

Age Groups showing the number of Patients in each Group of the First 300 Discharges from Sanatorium.			Class T.B. Minus.		Class. T.B. Plus Group I.		Class T.B. Plus Group II.		Class T.B. Plus Group III.		Total Deaths.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1st Age Group 0-15 Years ...	58	19·3 %	2	3·4 %	...	...	...	...	...	...	2	3·4 %
2nd Age Group 16-35 Years ...	207	69 %	9	4·3 %	...	...	15	7·2 %	35	16·9 %	59	28·5 %
3rd Age Group 36 Years and upwards ...	35	11·6 %	...	...	...	...	1	2·8 %	14	40 %	15	42·8 %
Total	300	100 %	11	3·6 %	...	...	16	5·3 %	49	16·3 %	76	25·3 %

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4. 49 or 64·47 per cent. of the total deaths occurred in patients classified in Group III.

5. Of 186 patients admitted as T.B. Minus and T.B. Plus Group I., 11 or 5·9 per cent. died. Of 114 patients admitted as T.B. Plus Group II. and T.B. Plus Group III., 65 or 57·0 per cent. died.

6. Of the 11 deaths occurring in patients in Class T.B. Minus, 9 occurred in patients aged 16—35. No deaths occurred in patients graded Class T.B. Plus Group I.

Of 16 deaths in T.B. Plus Group II., 15 occurred in patients aged 16—35.

Of 49 deaths in T.B. Plus Group III., 35 occurred in patients aged 16—35, and 14 among patients aged 36 and upwards.

Two or 3·4 per cent. of the patients admitted under 15 years of age, died.

59 or 28·5 per cent. of the patients admitted 16—35 years of age, died.

15 or 42·8 per cent. of the patients admitted 36 years of age and upwards, died.

7. Of the 300 patients under review, in 120 or 40 per cent. the disease is quiescent and the patients are working and an additional 61 or 20·3 per cent. are working although the disease is not yet arrested. 80 per cent. of the patients who are working are following their former occupations.

8. Out of 133 cases admitted in the early stage of the disease, 108 or 81·2 per cent. are well and working, while 9 or 6·76 per cent. although working, still show physical signs of the disease.

9. Of 53 cases admitted in the most advanced stage of the disease, none are working, while 49 or 92·4 per cent. are deceased ; the remaining 4 or 7·5 per cent. are unfit for work.

Of the 135 females admitted, 30 or 22·2 per cent died. Of the 165 males, 46 or 27·8 per cent. died.

CONCLUSIONS.

1. The results of Sanatorium treatment at Rushden House can be regarded as most satisfactory, and the fact that 40

per cent. of the patients are now well and working is most encouraging.

2. The chances of ultimate cure depend upon the stage of the disease on admission to institution. Out of 186 patients admitted in the two early stages of the disease, 119 or 64·0 per cent. are working and the disease arrested, while out of 114 patients admitted in the two advanced stages of the disease less than 1 per cent. are working and 65 or 57 per cent are deceased. In order to obtain the best results it is important that patients should consult their doctors as soon as there is any suspicion of disease, and that general practitioners should seek the advice of the Tuberculosis Officer as soon as possible.

ANNUAL RETURN SHOWING EXTENT OF RESIDENTIAL TREATMENT DURING 1926. (Memo. 37/T).

			In Institution on Jan. 1st	Admitted during year.	Discharged during year.	Died in Institution	In Institution on Dec. 31st
Number of Patients.	Adults.	M.	26*	67	66	1	27**
		F.	27	60	59	...	28
	Children.	M.	7	9**	7	1	7**
		F.	8	7	8	...	7
Number of Observation Cases.	Adults.	M.	...	...	...	...	...
		F.	...	...	...	...	...
	Children.	M.	...	...	...	...	...
		F.	...	...	...	...	...
TOTAL ...			68*	143	140	2	69

* 1 Adult male discharged on 1st and not replaced.

** 1 boy under 15 on admission but now over 15 and counts as adult.

ANNUAL RETURN SHOWING EXTENT OF RESIDENTIAL TREATMENT DURING 1926 (Ex-Service Pensioners).

Disease Quiescent.	Improved.	No Material Improvement.	Died.	Still in Institution.	Total.
1	9	...	...	2	12

B. Non-Pulmonary Tuberculosis.—In no other branch of Tuberculosis is the prognosis more hopeful and the treatment more successful than in non-pulmonary tuberculosis if treated early. As stated early in the report a few days delay in securing the admission of non-pulmonary cases to special hospitals may vitally affect the prognosis. There should be no waiting list for non-pulmonary tuberculosis.

For the financial year ended March 31st, 1927, a sum of £880 was allowed in the estimates for the institutional treatment of non-pulmonary tuberculosis cases. This sum was later increased to £1,050.

During the year ended December 31st, 1926, 19 patients suffering from non-pulmonary tuberculosis were treated in various institutions ; in addition, two suspected cases were admitted to institutions for observation, making a total of 21 cases. Of this number, 10 were in institutions at the commencement of the year. 14 patients were discharged during the year, leaving 7 still in institutions at the close of the year.

The following are the institutions to which patients have been sent :—

The Royal Sea Bathing Hospital, Margate.
Wingfield Orthopædic Hospital, Oxford.
Shropshire Orthopædic Hospital, Oswestry.
Manfield Orthopædic Hospital, Northampton.
The Royal National Orthopædic Hospital, London.

Stamford, Rutland and General Infirmary.
The Heatherwood Hospital, Ascot.

The various conditions from which the 14 patients who were discharged during the year were suffering, are classified as follows :—

T.B. Bones and Joints	10
T.B. Abdominal Organs	—
T.B. Other Organs	2
T.B. Observation cases	2

In 10 of the 14 patients discharged from institutions during the year, the disease was arrested. In two there was great improvement, with hope of ultimate complete recovery. The remaining two observation cases were discharged as non-tuberculous.

Before patients are admitted to Institutions, enquiries are made as to the financial circumstances of the family and the appropriate Sub-Committee considers what contributions (if any) shall be made towards the cost of treatment.

The increase in the number of non-pulmonary cases admitted to Institutions is in large part due to the activities of Manfield Orthopædic Hospital. The Orthopædic Surgeon at that Institution during his visits to the Clinics discovers cases which had not previously been brought to the notice of the Public Health Department. While there has been a decrease in the number of adult cases of non-pulmonary tuberculosis admitted to Institutions there has been a large increase in the number of children admitted.

It is gratifying that the County Council is taking sympathetic interest in the large and important question of crippledom ; the money will be wisely spent not only from the point of view of the excellent benefit received by the patient, but also in the lessening of the number of cripples with the consequent saving to the rates in the future.

HOME VISITATION BY TUBERCULOSIS NURSES.—During the year 1926, two of the Tuberculosis Nurses resigned. The vacancies were not filled, but the work transferred to Health Visitors and District Nurses. The remaining Tuberculosis Nurse, Miss Dashwood, attends at each of the three Dispensaries, and, in addition, carries out the home visitations of the tuberculous in the Urban Districts of Kettering and Wellingborough.

The total number of visits paid by the Tuberculosis Nurses, Health Visitors, and District Nurses to the homes of tuberculous patients was 3,999. In the scheme of co-ordination referred to earlier in the report it is suggested that the work of Tuberculosis Nurses shall be merged into the general duties of Health Visitors.

LECTURES TO HEALTH VISITORS AND DISTRICT NURSES.

During the year the following lectures were given to the Health Visitors by the Tuberculosis Officer :—

1. Tuberculosis, Immunity, Heredity and Environment.
2. Tuberculosis, Pathology and Treatment.

The Tuberculosis Officer also lectured to the District Nurses on Ultra Violet Radiation in the treatment of Tuberculosis.

EXTRA NOURISHMENT.—The names of persons suffering from Tuberculosis who need extra nourishment are submitted to a Special Sub-Committee, who make recommendations after consideration of the financial circumstances of the family ; although the Council have power under Section 3 of the Public Health (Prevention and Treatment of Diseases) Act, 1913, to give nourishment other than milk, e.g., butter, eggs, etc., only milk has been granted.

During the year, 33 patients suffering from Tuberculosis were granted extra nourishment and the quantity of milk distributed amounted to 8,183 pints.

SHELTERS.—The number of Shelters occupied by tuberculous patients during the year was 19. All these are the property of the County Council. Eight of the Shelters were transferred to different parts of the County during the year. The shelters are loaned to patients on the advice of the Tuberculosis Officer.

TUBERCULOSIS AND THE BOOT AND SHOE INDUSTRY.

The opinion has long been held that the incidence of Pulmonary Tuberculosis in the Boot and Shoe Industry is unduly high. In various parts of this report it is shown that—

1. Of the new patients who attended the Tuberculosis Dispensaries during the year and who suffered from Tuberculosis, 68 or 24·4 per cent. were shoe operatives.

2. Of the total patients admitted to Rushden House Sanatorium during the year, 37 or 25·8 per cent. were shoe operatives.

3. Of the 146 deaths of adults reported by the Registrars, 38 or 26 per cent. were shoe operatives.

These figures in themselves, however, must not be taken as a true index of the incidence of Pulmonary Tuberculosis. At the 1921 Census, out of 98,833 occupied workers over 12 years of age 19,213 or 19·43 per cent. were shoe operatives, so that one would expect to find a large percentage of these workers suffering from any disease owing to the large proportion of workers occupied in that trade.

During the year, 38 shoe operatives died from Tuberculosis, giving a death-rate from this disease among shoe operatives of 1·97 per 1,000.

Compared with the Tuberculosis death-rate for the General population of the County for the year, viz. :—0·76 per 1,000, it is high. One would expect, however, the incidence of Tuberculosis in an industry where operatives necessarily work in close proximity to each other, to be higher than that for the general population. Before coming to any conclusion, the incidence should be compared with that of other industries where operatives work under similar conditions.

This opinion as to the high incidence in Boot operatives is, however, supported by the report of the Medical Research Committee upon the incidence of Phthisis in relation to the Boot and Shoe Industry published in 1915.

The conclusions reached by that Committee are summarised as follows :—

(i.) Phthisis is specially prevalent among workers in the boot and shoe industry, as compared with the general population.

(ii.) The individual worker is predisposed to infection by the sedentary nature of his employment, and possibly by the attitude he adopts at work.

(iii.) The infection is probably

(a) Increased by the number of infective workers, and

(b) Favoured by want of light, the presence of infected dust, and inadequate ventilation in the work rooms.

The relative proportions of workers in the different departments of the boot and shoe industry are roughly as follows :—

Clickers	18 per cent.
Machinists	30 ,,
Pressmen	10 ,,
Making up	20 ,,
Finishing	17 ,,
Shoe-room	5 ,,

It is notorious that the Tubercle Bacillus exacts his chief toll in the Finishing and Clicking Departments. Our figures over a period of three years, show that while these two departments furnish 35 per cent. only of the total number employed, they account for nearly 60 per cent. of the deaths from Tuberculosis at all ages.

It is probable, that were it possible to reduce the death-rate in these two departments to that prevailing in the others, the industry would cease to hold its present unenviable reputation as a breeding ground for Tuberculosis.

One finds a widespread impression among employees, and also among experienced physicians in the County, that the cause is to be found in the inhalation of dust generated in the various processes; and that possibly the cramped attitude of the clicker may be a contributory factor. The conditions prevailing in the different departments are widely dissimilar. A visit to a large factory towards the close of the working day impresses one as follows :—

In the clicking department the air is still, rather stagnant, but free from dust ; the room is tidy and well lit. The clickers' occupation is essentially sedentary and the work is light.

In the finishing department the contrast is marked ; the air is hot by reason of the gas jets used in the burnishing processes, and generally very dusty. This fine leather dust is generated by the machines used for scouring the heels and soles on rapidly revolving sand paper wheels. The work is sedentary and light also.

It seems reasonable to suppose that the cause operating in producing a high incidence of Tuberculosis in both these departments, may be similar, but as the clicking room is free from dust it seems not unreasonable to presume that dust is not the cause.

It is a general rule, in industries predisposed to Tuberculosis by reason of dust inhalation, that other respiratory diseases also show a marked prevalence. Thus, workers exposed to the inhalation of Silica dust, Steel dust, and so on, all show a marked predisposition to lung diseases of various sorts, bronchitis and pneumonia being the chief.

Among boot and shoe operatives no such state of affairs prevails. Further, where the inhalation of injurious dust is going on, the primary effect on the Lung Tissue is to produce Fibrosis. An examination of a considerable number of chest X-rays, and inquiries among Radiologists fails to show any increased tendency to Fibrosis in the boot factory operatives.

Finally, "dusts" producing Pneumoconiosis, as a rule are only injurious to health when their chemical composition differs from that of the human body. Thus, the dusts of Emery, Glass, Sandstone, and Flint are extremely injurious, whilst those of Ivory, Horn, Bone, and other animal structures do not injure the lungs.

There does not appear to be anything in the Boot and Shoe trade *per se* productive of an increased Tuberculosis mortality. There do not appear to be any such general predisposing causes as excessive alcoholism, or bad housing.

It has been pointed out that the work is very light in the clicking and finishing departments, and consequently it is possible for a Tuberculous person to remain at work in either of these departments far longer than he could were his employment of a more active nature, with the result that it is possible for a high percentage of operatives to be suffering from Tuberculosis in these departments with an increased risk of infection to others.

At the Wellingborough Tuberculosis Dispensary recently we had two cases of Pulmonary Tuberculosis in the children of a certain family. We asked for all "contacts" for examination, and these were examined, with the exception of the father. One further case of Tuberculosis was discovered. It was felt that in this household there must be exceptional exposure to infection. We insisted on the father's attendance, but he was unable to spare the time off from his work as a shoe operative. He was also working overtime. We, however, suited his convenience as to time, and found he had extensive Pulmonary disease. His Sputum was loaded with Tubercle Bacilli. He refused to discontinue working. This must be a common experience.

Employees are taken on in these departments as youths of 14 or 15 years. They are, therefore, exposed to exceptional infection at a still susceptible age. The remedy is obvious :—

(i.) The Physician or the Tuberculosis Officer must be able compulsorily to suspend an employee from work who is a case of " open " Tuberculosis.

(ii.) The periodic examination of employees, particularly in the dangerous departments, is necessary.

The adoption of these recommendations would go far to improve the present state of affairs, and it should not be beyond the wit of man to devise ways and means of giving effect to them.

THE PROBLEM OF THE ADVANCED CONSUMPTIVE.

During the past fifty years there has occurred in most civilised countries a steady fall in the mortality from Tuberculosis in all its forms. In other words the decline in the Tuberculosis death-rate began many decades before the inauguration of any schemes by Local Authorities to limit the spread of the disease.

Within recent times and *pari passu* with the concerted action of the State and the Local Authorities, the rate of fall in Tuberculosis mortality has become accelerated, and it is this acceleration which constitutes the index of the success of these efforts.

It is now admitted as beyond argument, that the general fall witnessed prior to the Anti-Tuberculosis movement was consequent on the increasing saturation of the people by

Tuberculosis infection. There is a wide difference between infection and disease. Infection may, sooner or later lead to disease, but in the bulk of the human species living in civilised communities, infection by the Bacillus Tuberculosis leads to a degree of immunity, which is sufficient to ensure protection from disease for a lifetime.

The universality of Tuberculosis infection in civilisation is admitted as a fact. How this infection is brought about is still a subject regarding which there are several schools of thought.

Living Tubercle Bacilli have never been found in the open air, and there has thus arisen a school, whose views might be thus expressed :—" The chances of 'Universal' Tuberculisation being brought about by so promiscuous a means as contact with people suffering from 'open' Tuberculosis are slender. Some 'Universal' source of such infection must be found. All human beings living in civilised communities, some time or other, and probably frequently, drink tuberculised milk, and, therefore, the source of this 'Universal' infection is the Tuberculous Cow." They go further, and while admitting that the ingestion of tuberculised milk carries with it a risk of actual disease developing, aver that in the main the ingestion of tuberculised milk is beneficent in its production of an increasingly widespread immunity to Tuberculosis. These arguments are attractive and comforting, particularly to Dairy Farmers, but they are probably quite fallacious, as may thus be demonstrated.

1. The Cow, when Tuberculous, harbours Tubercle Bacilli of a variety known as Bovine.

The Bovine Tubercle Bacillus, when producing disease in man, gives rise to tuberculosis of the bones, joints, glands, peritoneum or meninges. Bovine Tubercle Bacilli practically never in Man produce lung tuberculosis. The damage to the human species produced by the Bovine Tubercle Bacillus is small when compared with the ravages produced by the human type of Bacillus.

2. It has never been satisfactorily demonstrated that prolonged residence of Bovine Tubercle Bacilli in Man can produce any change in type. In fact, once Bovine, always Bovine.

3. When infection occurs in a human being either by Bovine or Human Tubercle Bacilli, after an indetermined incubation period, flagrant disease may develop, or sufficient immunity may be provoked to secure adequate protection for a lifetime. In another group the infection may lie dormant for years, then some overstrain, exposure, etc., may permit the infection to gain the upper hand, and manifest disease develops. This latter event is spoken of as a re-infection, or superinfection. It is a re-infection of tissue, but it generally comes from within. The bulk of re-infections are admittedly endogenous in origin.

It follows that the disease which develops must be produced by the bacilli of the same type as produced the original infection. Were the universality of Tuberculosis infection brought about by the ingestion of Bovine Tubercle Bacilli in milk, then it should be found that our cases in the main would have the Bovine Tubercle Bacillus as their root cause.

The converse is true. The chief battle lies with the Bacillus Tuberculosis Humanus. He is the chief enemy. Every case of Pulmonary Tuberculosis originates in some other case of Pulmonary Tuberculosis.

A strenuous campaign has been begun against the Bovine Tubercle Bacillus, and rightly so, if the chief producer of crippledom is to be eliminated, but the position in this Country at present at any rate, is quite illogical ; for, while the minor evil of Bovine Tuberculosis is being dealt with, practically nothing is being done to eradicate or lessen the major evil, the source of all Lung Tuberculosis.

There are many points of similarity in Tuberculosis and Leprosy. The causative organisms are almost identical morphologically. The lesions produced are in many ways like each other. Leprosy in the Middle Ages was a common disease in our Country. Then a revolting community segregated the Leper, and, in the course of time the disease died out.

The same idea, fortunately, cannot be applied to Tuberculosis. Fortunately, because were it possible thus to stamp out Tuberculosis, in the absence of any substitute for "natural infection," our last state would be worse than our first, since there is no doubt that we would become intensely susceptible to the disease. Our position would, in fact, be similar to that of the Senegalese Battalions during the Great War. They came to France, as it were a virgin soil insofar as Tuberculosis is concerned, they mixed with a Tuberculised community and they died of the disease in great numbers. The disease, moreover, was of an extremely rapid type.

The real risk in Tuberculosis consists in receiving too massive doses or, too frequently repeated doses, and it is for this reason that, until a means has been devised of dealing satisfactorily with the "Advanced Consumptive" that much of our efforts will be wasted.

To segregate every advanced Consumptive is, in this Country, impossible. The experiment has been tried and failed. Such Pulmonary Hospitals, in fact, become stigmatised as "Homes for the dying," and unless compulsory powers are used, they remain empty. What then is to be done ? The experience of the Papworth Tuberculosis Settlement indicates that an "open" consumptive can be perfectly a safe member of the community, if he is willing and instructed.

In Northamptonshire we have our Rushden House Sanatorium with some 14 beds for advanced cases. The custom, at present, is to fill these beds with two types of cases : the very advanced and hopeless, and the observation case whose prognosis is doubtful. When the latter improves he is transferred to a Sanatorium bed proper. The advanced case, however, is retained until death is imminent or has occurred.

The suggestion is that a much better use could be made of the beds for advanced cases, by setting apart a certain number for the purpose of the "class" system. Advanced cases should be admitted to these beds solely for the purpose of being taught by precept and example how to minimise the risks they cause to the community. One to two months instruction would be sufficient. Should definite improvement set in they would be transferred to a Sanatorium bed, but if at the end of one or two months they manifested no progress, they would be transferred to their homes. In this way it would be possible to greatly mitigate the danger of the advanced consumptive to the community, and that at no increased cost to the County Council. With only a few beds at our disposal for the care of the advanced consumptive, the present practice is merely wasteful and does not advance our cause. By limiting the period of residence and regarding the matter as purely educational, the scheme suggested would undoubtedly tend towards the end we have in view, which is, the prevention of Tuberculosis. In caring for the individual this objective is frequently obscured.

MATERNITY AND CHILD WELFARE.

Births.

During the year 1926, 3,393 births were registered in the Administrative County (1,793 males and 1,600 females) this is a decrease of 87 on the year 1925. Of the total number of births, 156 were illegitimate (90 males and 66 females) or 4·5 per cent.

The birth-rate for the County during 1926 was 15·84 per 1,000 of the population as against 16·16 for 1925. This is the lowest birth-rate recorded, excluding the years 1917-19.

In the Combined Urban Districts the birth-rate was 15·73 and in the Combined Rural Districts 15·93, a reduction of 0·39 in the latter and 0·25 in the former as compared with 1925.

TABLE X.

DISTRICTS.	Births.		Deaths under One year.		Maternal Mortality.	
	No.	Rate Per 1,000 of Population	No.	Rate Per 1,000 Births.	No.	Rate Per 1,000 Births.
Brackley Borough	30	13·6	2	66·6	...	...
Daventry ,,	61	17·4	5	81·9	...	...
Higham Ferrers ,,	37	11·9	3	81·0	...	...
Burton Latimer Urban	39	11·0	4	102·5	...	...
Desborough ,,	68	15·5	7	102·9	...	...
Finedon ,,	86	20·9	3	34·8	...	...
Irthlingborough ,,	68	13·6	3	44·1	...	...
Kettering ,,	513	16·7	33	64·3	1	1·94
Oundle ,,	27	10·3	1	37·0	...	...
Raunds ,,	55	14·6	2	36·3	...	...
Rothwell ,,	73	15·4	2	27·3	1	13·69
Rushden ,,	208	15·3	6	28·8	1	4·80
Wellingborough ,,	329	16·1	18	54·7	2	6·07
Combined Urban Districts	**1594**	**15.73**	**89**	**55.83**	**5**	**3.13**
Brackley Rural	95	14·5	3	31·5	...	...
Brixworth ,,	198	16·7	11	55·5	2	10·10
Crick ,,	41	17·0	5	121·9	...	...
Daventry ,,	214	15·4	2	9·3	3	14·01
Easton-on-the-Hill ,,	32	21·3	2	62·5	...	...
Gretton ,,	24	17·2	1	41·6	...	...
Hardingstone ,,	131	17·6	5	38·1	2	15·26
Kettering ,,	162	17·1	7	43·2	1	6·17
Middleton Cheney ,,	42	17·9	3	71·4	...	...
Northampton ,,	157	19·2	15	95·5	...	...
Oundle ,,	97	14·9	4	41·2	...	...
Oxendon ,,	49	12·5	4	81·6	...	...
Potterspury ,,	74	15·4	5	67·5	...	...
Thrapston ,,	136	13·1	6	44·1	...	...
Towcester ,,	152	15·3	5	32·8	1	6·57
Wellingborough ,,	195	15·3	10	51·2	2	10·25
Combined Rural Districts	**1,799**	**15.93**	**88**	**48.91**	**11**	**6.11**
Administrative County ...	**3,393**	**15.84**	**177**	**52.16**	**16**	**4.71**

Table X. shows the number of births and the birth-rate in each of the Urban and Rural Districts.

In the Urban Districts the highest rate was in Finedon (20·9) and the lowest in Oundle (10·3). In the Rural Districts the highest rate was in Easton-on-the-Hill (21·3) and the lowest in Oxendon (12·5).

The rate for England and Wales for 1926 was 17·8 as against 18·3 for 1925.

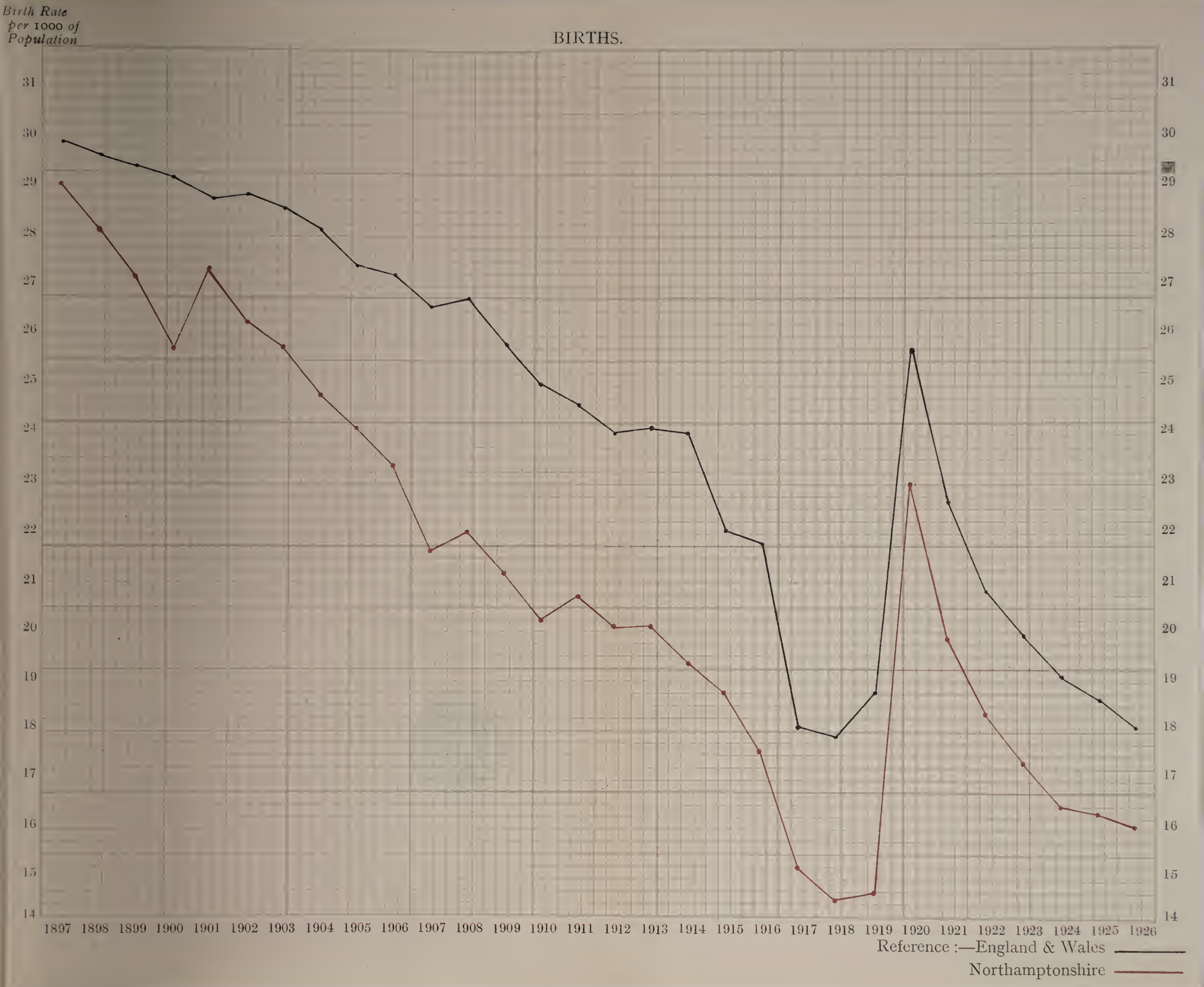
The accompanying chart shows a comparison of the birth-rate for England and Wales and for the County from 1897 to 1926.

Notification of Births.—During the year 1926 an application was made to the Ministry of Health for an Order under Section 2 (4) (b) of the Notification of Births Act 1907, transferring the administration of the Act in the Districts included in the Council's scheme under the Maternity and Child Welfare Act from the Local Sanitary Authorities to the County Council.

The Minister made the Order applied for, on the 4th August, and it commenced to operate as from 1st September, 1926. Medical practitioners and midwives resident and practising in the County were thereupon informed that as from that date all notifications of births must be sent to the County Medical Officer of Health.

Owing to the fact that the Order has only been in operation during the last half of the year no annual figures can be given, and in consequence no reliable statistics are available as to Stillbirths.

The object of Notification, in addition to Registration, is to ensure that the births of infants are brought to the notice of Health Visitors with the least possible delay, and as a result the latter will be able to visit the homes and advise the mothers early upon correct methods of feeding, etc. In order to ensure a high percentage of notifications a list of



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notifications is sent to local registrars each month, and they, in return for a small fee, send to this office the names of any infants registered which are not included in the list. On receipt of these names the County Medical Officer of Health communicates with the parent asking for the name of the midwife and doctor in attendance, and a letter is then sent to such doctor or midwife reminding them of their duties under the Notification of Births Act and the penalties for non-compliance.

STILLBIRTHS.

Stillbirths were reported on by the Health Visitors in 76 cases, and from the information so obtained the following conclusions were arrived at. In 40 cases the death appeared to have been intra-natal, the subjoined abnormalities having presented themselves :—

Malpresentation	20
Prolonged Labour	15
Asphyxia and Ante-Partum Hæmorrhage ...	2
Injury to Head (B.B.A.)*	1
Drowned (B.B.A.)*	1
Craniotomy	1
	40

In 15 cases the death appeared not to have been intra-natal. In 21 cases the death was unaccountable.

The midwives' returns show 25 male and 27 female stillbirths, 3·1 per cent. of all confinements attended, or slightly less than in 1925.

Infantile Mortality.—The number of deaths of infants under one year during 1926 amounted to 177 (95 males and 82 females) and of this number, 13 were illegitimate. Of the total deaths, 89 occurred in the Combined Urban Districts and 88 in the Combined Rural Districts.

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* Born before arrival of attendant.

The infantile mortality, i.e., the number of deaths under one year per 1,000 births, for the whole Administrative County was 52·16 as compared with 56 for 1925 ; this is the lowest rate on record and compares very favourably with the rate of 70 for England and Wales for 1926.

The great decrease in the number of infantile deaths can be better understood when it is recalled that in 1904—22 years before—the infantile death-rate was 116.

In the Combined Urban Districts the infantile mortality rate was 55·83, the highest being in Desborough (102·9) and the lowest in Rothwell (27·3). In the Combined Rural Districts the rate was 48·91, the highest being in Crick (121·9) and the lowest in Daventry (9·3).

Table X. (on page 81) shows the number of infantile deaths with rates per 1,000 births for each District in the Administrative County.

The accompanying Table gives the results of investigations made by Health Visitors into deaths of infants in their areas.

The chart shows a comparison of the Infantile Mortality in England and Wales and the County from 1897 to 1926.

Ophthalmia Neonatorum.—During the year fifteen cases were notified, nine in the Urban Districts and six in the Rural Districts.

The number of Ophthalmia Neonatorum cases remains practically the same as in other years, but there is an improvement in notification. The cases, on the whole, were very mild ; the only case with permanent damage to the eye occurred in Lambeth Hospital, the birth having taken place there. In 10 cases midwives were present at the birth. Five cases were visited whilst under the midwife's care.

Notified.	Treated		Vision unimpaired.	Vision impaired.	Total Blindness.
	At Home.	In Hospital.			
15	12	3	14	1	—

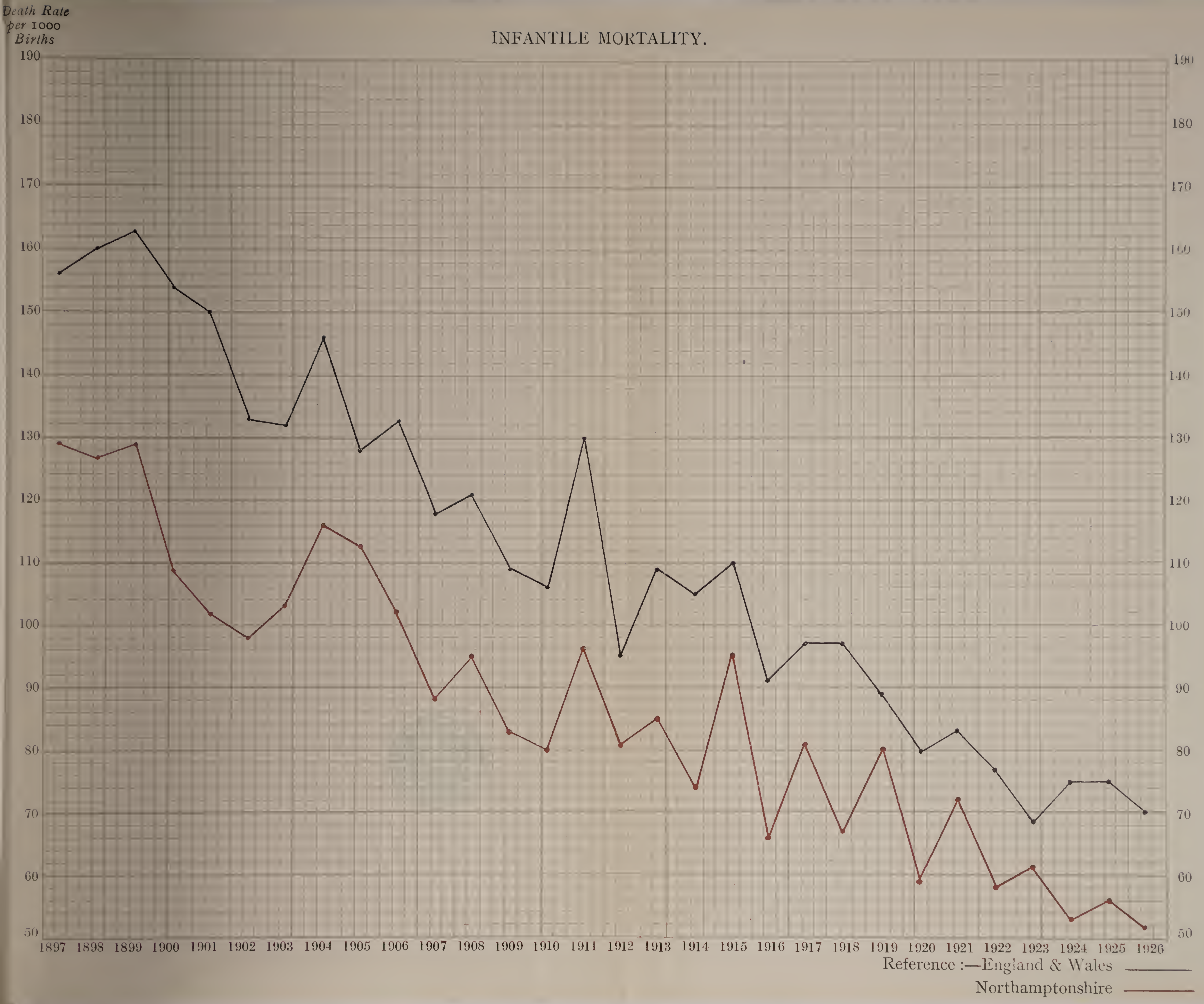
TABLE XI.

SUMMARISED TABLE OF DEATHS OF INFANTS.

Causes of Death.	Under 1 Month	1 Month and under 2 Months.	2 Months and under 3 Months.	3 Months and under 4 Months.	4 Months and under 5 Months.	5 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under 1 Year	1 Year and under 2 Years.	2 Years and under 3 Years.	3 Years and under 4 Years.	4 Years and under 5 Years.	Total Deaths over 1 and under 5 years.	Grand Total.	**Causes of Death.**
WHOLE-TIME HEALTH VISITOR AREAS.																WHOLE-TIME HEALTH VISITOR AREAS.
Premature Birth ...	2	...	...	...	...	...	...	...	**2**	...	...	...	...	...	**2**	Premature Birth.
Atrophy, Debility and Marasmus	...	2	1	...	...	...	...	...	**3**	...	...	...	...	...	**3**	Atrophy, Debility and Marasmus.
Congenital Heart Disease ...	...	...	1	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Congenital Heart Disease.
Convulsions	...	...	...	...	...	1	2	1	**4**	1	...	...	...	**1**	**5**	Convulsions.
Meningitis	...	1	...	...	...	...	1	1	**3**	1	1	...	...	**2**	**5**	Meningitis.
Bronchitis	...	...	...	1	...	...	1	...	**2**	1	...	...	...	**1**	**3**	Bronchitis.
Pneumonia (all forms) ...	...	1	2	3	1	2	3	3	**15**	6	5	...	...	**11**	**26**	Pneumonia (all forms).
Whooping Cough	...	...	1	...	...	...	1	...	**2**	1	...	...	...	**1**	**3**	Whooping Cough.
Jaundice	1	...	...	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Jaundice.
Syphilis	...	...	1	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Syphilis.
Pyloric Stenosis	...	...	1	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Pyloric Stenosis.
Septic Poisoning (Eczema) ...	...	...	1	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Septic Poisoning (Eczema).
Suffocated	...	...	1	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Suffocated.
Osteomyelitis	...	...	...	1	...	...	...	...	**1**	...	...	...	...	...	**1**	Osteomyelitis.
Septicæmia	...	...	...	...	1	...	...	...	**1**	...	...	1	...	**1**	**2**	Septicæmia.
Tuberculosis	...	...	...	...	1	...	...	...	**1**	...	...	...	...	...	**1**	Tuberculosis.
Tubercular Meningitis ...	...	...	...	...	...	...	...	...	...	...	...	1	...	**1**	**1**	Tubercular Meningitis.
Acute Laryngitis	...	...	...	...	...	...	1	...	**1**	...	...	...	...	...	**1**	Acute Laryngitis.
Bright's Disease	...	...	...	...	...	...	...	1	**1**	...	...	...	...	...	**1**	Bright's Disease.
Hydrocephalus	...	...	...	...	...	...	...	...	...	1	...	1	...	**2**	**2**	Hydrocephalus.
Croup	...	...	...	...	...	...	...	...	...	1	...	...	...	**1**	**1**	Croup.
Pyæmia	...	...	...	...	...	...	...	...	...	1	...	...	...	**1**	**1**	Pyæmia.
Epileptic Fits...	...	...	...	...	...	...	...	...	...	...	1	...	...	**1**	**1**	Epileptic Fits.
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	1	...	...	**1**	**1**	Scarlet Fever.
Accident	...	...	...	...	...	...	...	...	...	...	...	1	...	**1**	**1**	Accident.
TOTALS	**3**	**4**	**9**	**5**	**3**	**3**	**9**	**6**	**42**	**13**	**8**	**4**	...	**25**	**67**	TOTALS.
DIST. NURSE HEALTH VISITOR AREAS.																DIST. NURSE HEALTH VISITOR AREAS.
Premature Birth	2	...	...	...	...	...	...	...	**2**	...	...	...	...	...	**2**	Premature Birth.
Marasmus	...	2	...	...	...	...	...	...	**2**	...	...	...	...	...	**2**	Marasmus.
Convulsions	...	...	...	...	...	...	1	...	**1**	...	...	...	...	...	**1**	Convulsions.
Bronchitis	...	...	...	...	...	...	...	1	**1**	...	...	...	...	...	**1**	Bronchitis.
Pneumonia (all forms) ...	...	...	...	1	...	...	1	...	**2**	...	1	...	...	**1**	**3**	Pneumonia (all forms).
Gastritis	...	...	...	...	...	...	1	...	**1**	...	...	...	...	...	**1**	Gastritis.
Congenital Debility	...	1	...	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Congenital Debility.
Jaundice	1	...	...	...	...	...	...	...	**1**	...	...	...	...	...	**1**	Jaundice.
Gastro-Enteritis	...	...	...	1	1	...	...	...	**2**	...	...	...	...	...	**2**	Gastro-Enteritis.
Eczema	...	...	...	...	1	...	...	...	**1**	...	...	...	...	...	**1**	Eczema.
Pyloric Stenosis	...	...	...	...	1	...	...	...	**1**	...	...	...	...	...	**1**	Pyloric Stenosis.
Intussusception	...	...	...	...	1	...	...	...	**1**	...	...	...	...	...	**1**	Intussusception.
Diseased Kidneys	...	...	...	...	...	...	...	...	...	...	1	...	...	**1**	**1**	Diseased Kidneys.
Accident	...	...	...	...	...	...	1	...	**1**	...	...	...	...	...	**1**	Accident.
TOTALS	**3**	**3**	...	**2**	**4**	...	**4**	**1**	**17**	...	**2**	...	...	**2**	**19**	TOTALS.

BRITISH MUSEUM
66
OCT

INFANTILE MORTALITY.



BRITISH MUSEUM
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As regards ante-natal care in midwives' cases, 7 were visited, but in none was history of vaginal discharge obtained. In three cases no attendant was engaged for the confinement.

During the 8 years, 1919-1926, the following number of cases occurred :—

1919	...	17	
1920	...	27	
1921	...	15	
1922	...	20	
1923	...	14	
1924	...	17	(including 3 unnotified cases).
1925	...	15	(including 1 unnotified case).
1926	...	15	(including 1 case notified from Lambeth Hospital).

Under the Ophthalmia Neonatorum Regulations, 1926, which came into operation on October 1st, 1926, the duty of notifying all cases of Ophthalmia Neonatorum to the local sanitary authority is placed solely upon medical practitioners and not as hitherto on both medical practitioners and midwives. Under the *old* Regulations the dual responsibility of notification very often resulted in complete failure to notify, so that the *new* Regulations are welcomed.

The midwife is, of course, still compelled to send for medical help where a case of discharging eyes occurs in her practice, and also to send a copy of the request to the County Medical Officer of Health as Executive Officer to the Local Supervising Authority under the Midwives' Acts.

The Authority for making arrangements as to treatment is the Maternity and Child Welfare Authority, and consequently local medical officers of health are required by the *new* Regulations to send a copy of each notification of Ophthalmia Neonatorum to the County Council within 24 hours. In April, 1927, the Public Health Committee agreed to certain suggestions made by me in connection with the carrying out of the regulations, viz. :—

That medical practitioners

1. Be informed of the facilities for treatment to be provided by the County Council.

2. Be asked to insert on the notification form which they are required to send to the District Medical Officer of Health the words,

(a) I desire the services of a trained nurse, or
(b) I recommend institutional treatment,

should either be deemed necessary, and

3. Be informed that, *to avoid delay, they may apply direct to the County Medical Officer of Health* for special nursing or institutional treatment to be provided.

Arrangements are already in existence between the County Council and the Northamptonshire Nursing Association for a nurse to be sent to any case requiring special nursing, on request being made to the County Medical Officer of Health, and the Public Health Committee are nearing the completion of negotiations (May, 1927) for the provision of institutional treatment at the Northampton General Hospital : Stamford, Rutland and General Infirmary and the Hospital of St. Cross, Rugby.

Ophthalmia Neonatorum is a disease affecting the eyes of infants, and in 70 per cent. of the cases is due to the presence of the gonococcus. 25 per cent. of all cases of blindness are attributed to this cause. The prognosis in cases of Ophthalmia Neonatorum depends upon prompt and skilled attention. the results of delayed and unskilled advice are so disastrous that in my opinion treatment should only be carried out under the advice of a medical practitioner.

ORTHOPÆDIC TREATMENT OF DEFECTS (OTHER THAN TUBERCULOUS).

The chief causes of Crippling in Infants (other than Tuberculosis), are Infantile Paralysis and Rickets.

Infants suffering from crippling defects are brought to the notice of the County Medical Officer of Health by the Surgeon of the Manfield Orthopædic Hospital and the Health Visitors.

The Lady Medical Officer investigates each case and on her report the County Medical Officer of Health considers the necessity for hospital treatment.

The sum of £275 was provided in the estimates for the treatment of Infants under 5 years of age suffering from Crippling Defects.

During the year, 9 infants were admitted to Manfield Orthopædic Hospital at a cost of £221 12s. 6d. less contributions by parents amounting to £7 16s. 6d.; the first admission was on June 29th.

Their defects were classified as follows :—Spinal Curvature 1, Infantile Paralysis 3, Rickets 2, Talipes 2, Bow Legs 1.

Four cases remained under treatment at the end of the year, and of the 5 cases discharged, 1 was cured, 2 were much improved and advised to attend the "After Care" Clinic, 1 was improved but marked for operation at the age of 15, and 1 was removed from hospital owing to parent refusing consent to operation.

The prognosis in these cases depends upon early diagnosis and treatment. While it was customary in the past to advise delay in treatment until the infant was older, the tendency at the present time is for "Treatment as soon as possible." Early treatment will not only improve the chances of cure but will have the effect of lessening the number of cripples found at School Medical Inspections.

After Care.—The after care of cripples is one of the most important branches of orthopædic work, and in this connection the Manfield Orthopædic Hospital Committee are inaugurating a scheme for the formation of orthopædic clinics throughout the County. (At the beginning of June, 1927, Clinics had been established at the following places :—Northampton, Wellingborough, Peterborough, and Brackley).

Maternal Mortality.—During the year 1926, there occurred in the Administrative County 16 deaths as a result of Childbirth ; this corresponds to a figure of 4·71 per 1,000 births. Of these deaths, 5 occurred in the Urban Districts and 11 in the Rural Districts, corresponding to rates of 3·13 and 6·11 respectively.

The causes of death during Childbirth are classified as follows :—(1) Puerperal Sepsis ; (2) Other Accidents, etc., of Pregnancy. From the first cause there were 9 deaths, 2 occurred in the Urban Districts and 7 in the Rural. From the second cause there were 7 deaths, 3 in the Urban Districts and 4 in the Rural.

While the general death-rate and the infantile mortality rate in England and Wales and this County have shown a remarkable decrease during the last thirty years, there has been no definite decline with regard to Maternal Mortality. This is a matter of serious concern to those interested in the welfare of the mother.

In the year 1911, 15 mothers died in childbirth out of 4,421 births ; this corresponds to a maternal death-rate of 3·39 per 1,000 births. In the year 1926, 16 mothers died in childbirth out of 3,393 births or a maternal death-rate of 4·71 per 1,000 births. (Table X., on page 81, shows the maternal mortality with rates per 1,000 births for each District).

During the 16 years 1911-1926 (inclusive) 257 mothers died in childbirth out of 61,421 births or a maternal death-rate of 4·18 per 1,000 births.

* Chart A shows the Maternal death-rate in the County and in England and Wales for the years 1911-1926. It will be seen that the County rate shows a great rise over that of England and Wales during the years 1913, 1918, 1922 and 1923, and a fall below that of England and Wales in 1911, 1912, 1914, 1917, 1924 and 1925. As the rate for England and Wales is a mean for the whole of the Country, Northamptonshire compares quite favourably except for the years 1918, 1922 and 1923.

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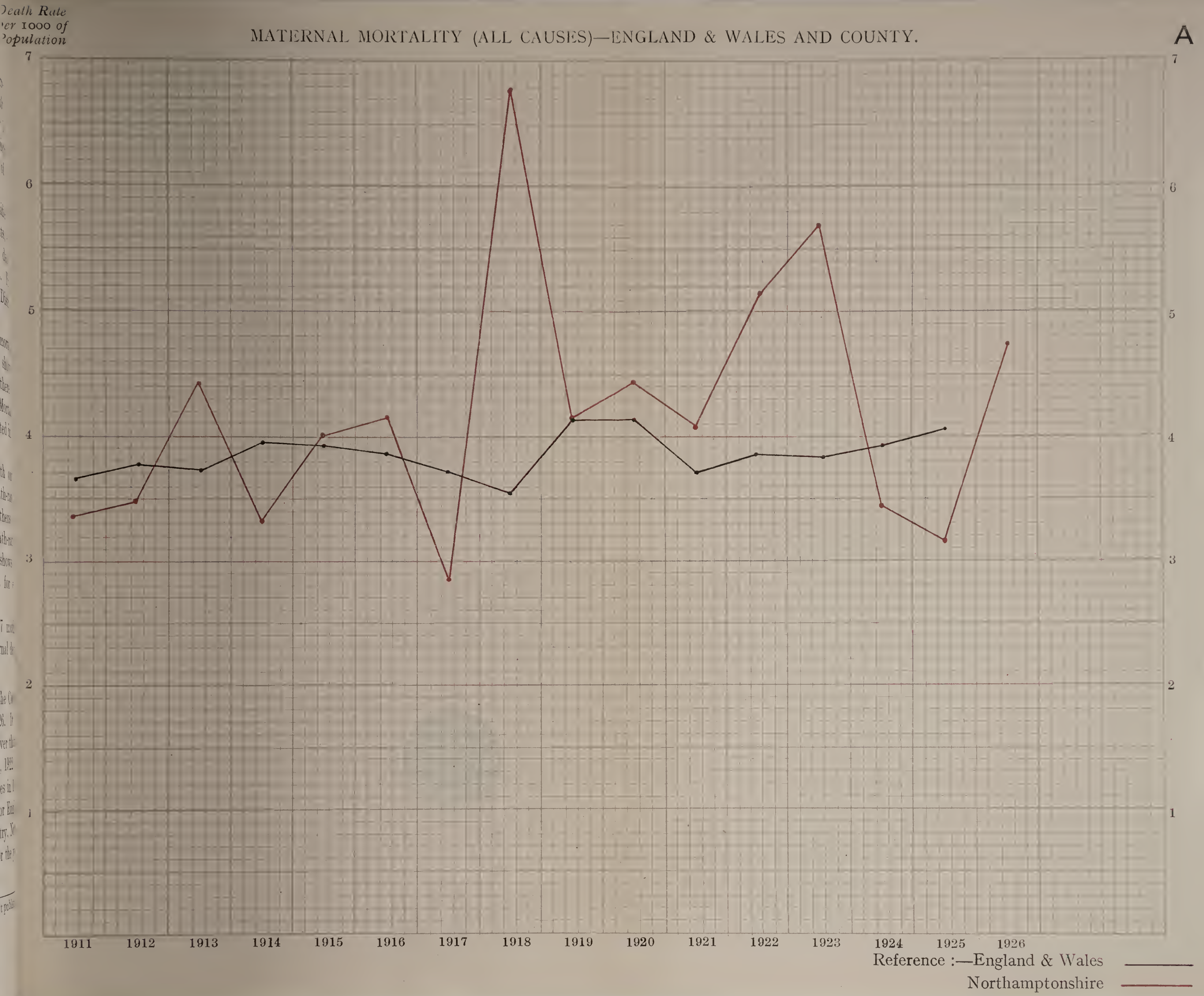
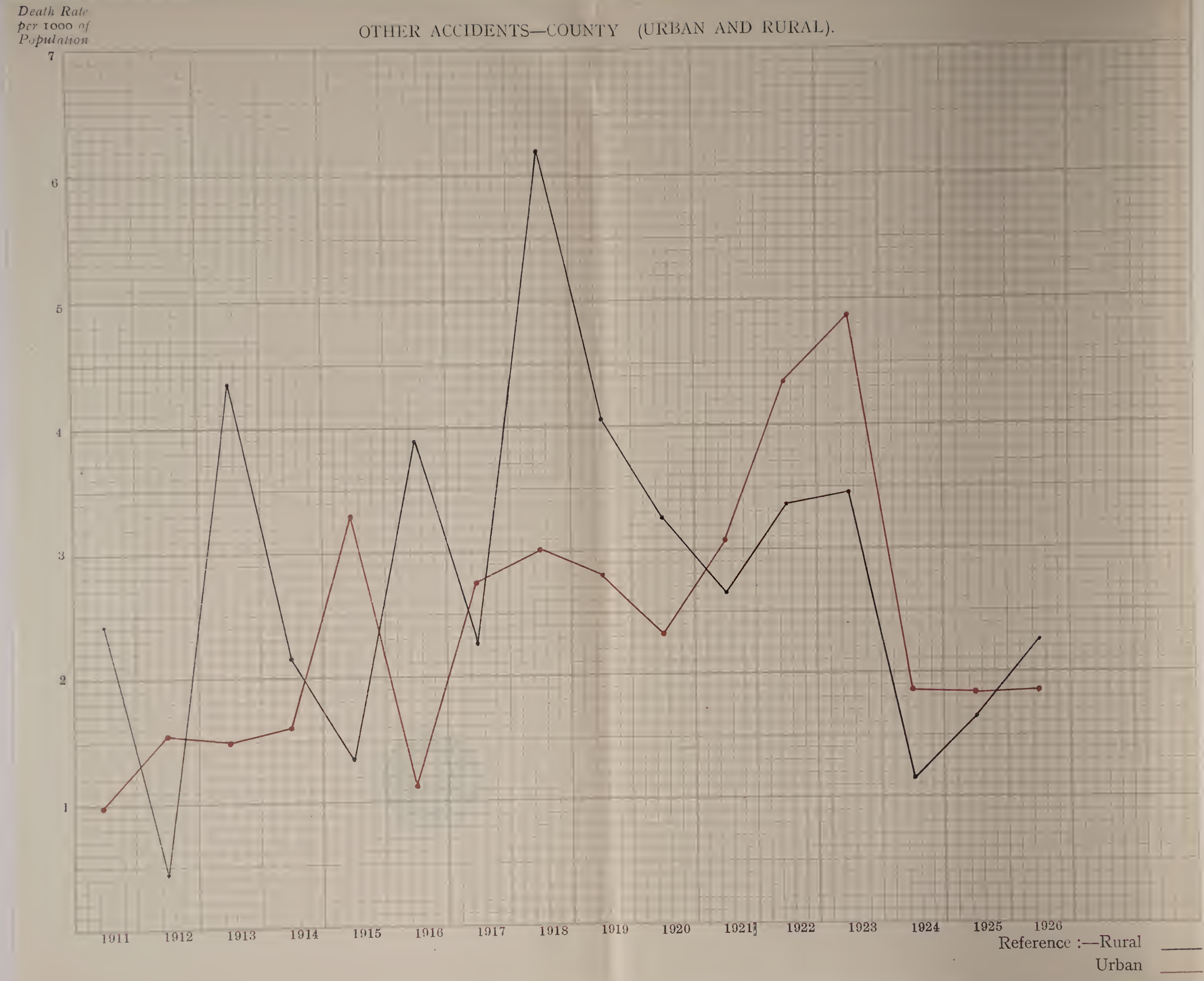
* The figures for 1926 for England and Wales are not yet published.

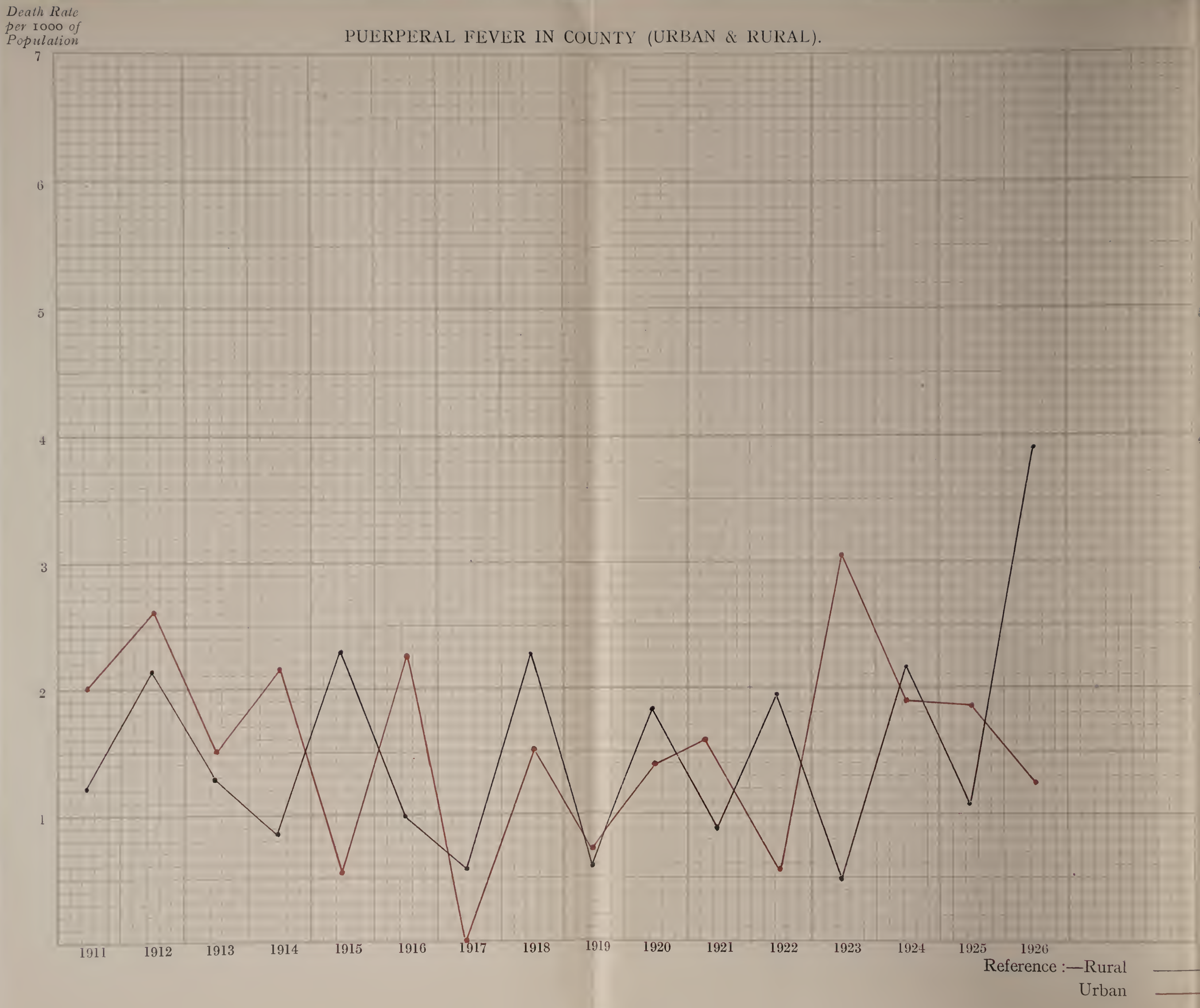
MATERNAL MORTALITY (ALL CAUSES)—ENGLAND & WALES AND COUNTY.

A



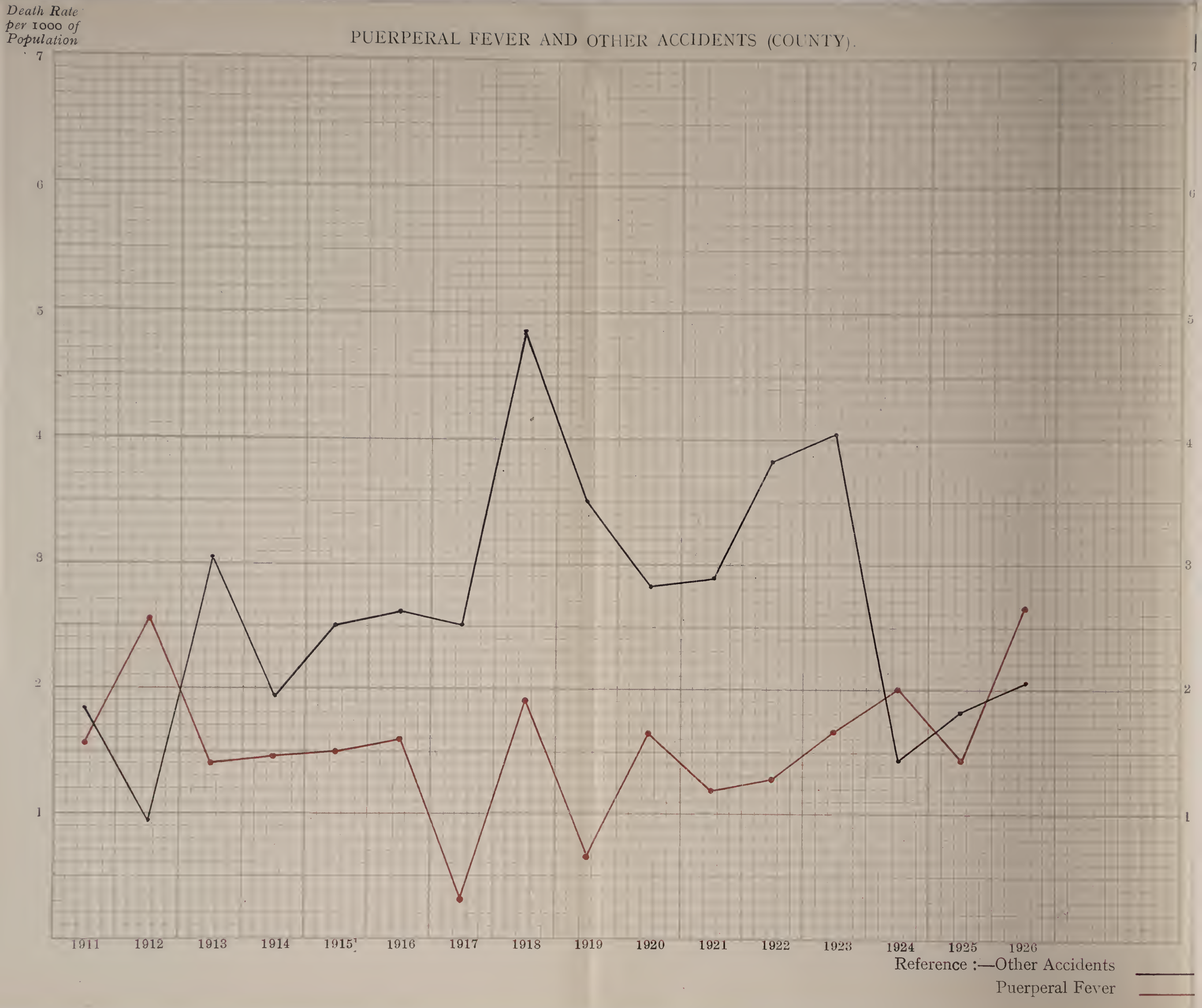
OTHER ACCIDENTS—COUNTY (URBAN AND RURAL).



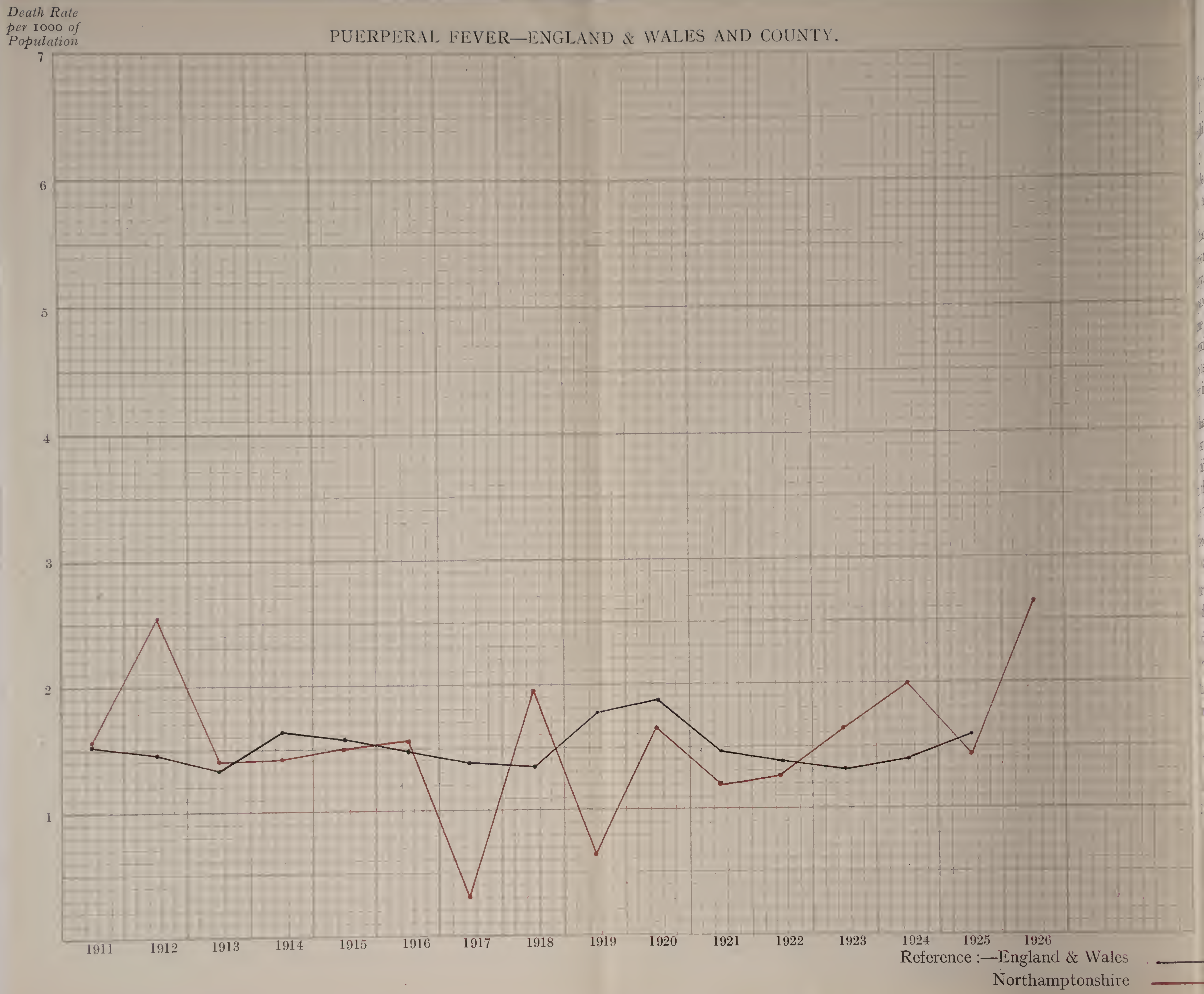


PUERPERAL FEVER IN COUNTY (URBAN & RURAL).

PUERPERAL FEVER AND OTHER ACCIDENTS (COUNTY).



PUERPERAL FEVER—ENGLAND & WALES AND COUNTY.



The causes of death in childbirth are :—

1. Puerperal Fever (a Septic condition occurring after childbirth).

2. Other diseases and accidents of childbirth (these include the toxæmias of pregnancy, accidents at childbirth and abnormalities, hæmorrhages, etc.)

*Chart B. shows a comparison of the death-rates from Puerperal Fever in England and Wales with that of the County. The County shows no remarkable rise or fall compared with that of England and Wales, and one must assume that the puerperal death-rate in the County is approximately the average of the rest of England and Wales. There is no appreciable decline in the death-rate from Puerperal Fever in the County from 1911-1926.

*Chart C gives a comparison of the deaths from other accidents and diseases of childbirth in England and Wales and this County. It will be seen that deaths in the County from these causes are, with the exception of 4 or 5 years, above the mean for England and Wales.

There is no decline in the death-rate from these causes in the County from 1911-1926.

Chart D compares the death-rates from Puerperal Fever and other accidents and diseases of pregnancy in the County.

It will be seen that the death-rates from other accidents and diseases are far higher than those for Puerperal Fever.

Chart E shows the death-rates from Puerperal Fever in Urban and Rural Districts.

It will be seen that the rates are comparatively even, and that there is no decline in either District.

Chart F compares the death-rates from other accidents and diseases in Urban and Rural Districts. As in Chart E the rates are approximately the same in Urban and Rural Districts, but there is a tendency to increase generally.

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* The figures for 1926 for England and Wales are not yet published.

We have held the opinion that the incidence of Puerperal Fever depended upon the medical and nursing facilities and other social conditions, and that it was more likely to occur in Districts where doctors and midwives were not available, where housing was poor and the standard of living low, and where domestic help was hard to obtain.

This, however, has not been borne out by Chart E which shows the death-rates for Puerperal Fever in Urban and Rural Districts are about equal.

With regard to the incidence of other accidents of pregnancy, one would imagine that the same conditions would apply, viz. :—that where conditions were better the incidence would be less. In previous investigations we concluded that this was not true, but that deaths from other accidents occurred in districts with all sociable commodities available as in districts not so well served. This is borne out by Chart F which shows the death-rate is approximately the same in Urban and Rural Districts when the whole 16 years are averaged.

CAUSES OF DEATH.

Other Accidents and Diseases of Pregnancy and Parturition. —Included under this heading are contracted pelvis and other malformities, eclampsia, nephritis, other toxæmias of pregnancy, heart disease, hæmorrhage and other diseases, e.g., pneumonia.

Table A. below shows the number of deaths from these causes during the years 1924-26 inclusive.

Attendant.	Number of births.	Deaths.	Percentage.
Doctor	5,225	18	·34 per cent.
Midwife (trained) ...	4,406	1	·02 ,,
Midwife (bonâ fide) ...	734	...	...
Handywoman	1	...	...
Unattended	1	...	...

During the year 1926 the deaths from other accidents and diseases of pregnancy and parturition occurred as follows :—

	Area	Present at Birth.	Cause of Death.
1.	Rushden	Doctor and Nurse	(1) Placenta prævia. (2) External hæmorrhage.
2.	Wellingborough	Doctor and handywoman	(1) Puerperal nephritis. (2) Uræmia.
3.	Wellingborough	Doctor and handywoman	(1) Pregnancy (8 months). (2) Eclampsia.
4.	Woodford Halse	Doctor and nurse	(1) Puerperal Eclampsia (post partum).
5.	Flore	Doctor and handywoman	(1) Adherent Placenta. (2) Post partum hæmorrhage. Cardiac failure.
6.	Blisworth	Midwife	Post partum hæmorrhage.
7.	Irchester	Doctor	(1) Syncope. (2) Internal hæmorrhage. Ectopic Gestation. Ruptured fallopian tube.

At first sight the high percentage of deaths occurring in Doctors Practices might appear extraordinary, but an explanation of this can be found in the fact that women who have had trouble during previous confinements engage a doctor, also women who know they have some abnormal condition or suffer from disease, e.g., heart disease, engage a doctor to attend them, so that doctors are engaged for more abnormal cases than are other attendants.

Puerperal Fever.—Table B. below shows the number of cases of Puerperal Fever occurring in the County during the years 1921-1926.

The following information as to the occurrence of and Mortality from Puerperal Fever is gleaned from the reports of the 6 years, 1921-26 inclusive.

No. of Births attended by:	Cases of Puerperal Fever.	Deaths.	Percentage of Cases of Puerperal Fever to No. of Births attended.	Percentage of Deaths to No. of Cases of Puerperal Fever.
Doctor 10799	48 (with trained midwife 19)	22 (with trained midwife 8)	0·44	45·8
Midwife 8366 (trained)	17	5	0·20	29·4
Midwife 2927 (Bonâ fide)	9	7	0·30	77·7
Handywoman 1	1	...	...	...
Unattended 1	1	1	...	...

Six of these cases were born before the arrival of an attendant. Three had engaged bonâ fide midwives and died ; two had engaged trained midwives and died ; one had engaged a trained midwife and recovered.

Too much stress, however, must not be laid on this Table, as the total figures are too small for grave deductions to be drawn from it.

It will be seen that the highest incidence occurs in the Doctors' Practices. Probably this is due to the fact that a Primipara is more likely to engage a doctor than a Multipara. It is well known that a Primipara is more liable to Puerperal Fever than a Multipara. This is due, possibly, to the necessity for interference, e.g., use of forceps. A great number of women who have had difficulty in previous confinements engage doctors, e.g., women who have had previously an adherent placenta, hæmorrhage, etc.

The high death-rate amongst the cases attended by bonâ fides (i.e., untrained midwives) is due in all probability to the fact that the doctor is summoned only when the patient is moribund.

During the year 1926, 23 cases of Puerperal Fever occurred (including two from Northampton General Hospital) and details with regard to these are as follows :—

Area.	Present at Birth.	Result.	Remarks.
1. Castle Ashby	Doctor and Nurse	Died	
2. Cranford	Doctor and Nurse	Died	Pyorrhœa and mental depression.
3. Rothwell	Doctor and handywoman	Died	
4. Spratton	B.B.A. of Midwife	Died	Illness during pregnancy—Influenza (?) no doctor consulted.
5. Brafield	Midwife	Died	
6. Kettering	Doctor	Died	
7. Brixworth	B.B.A. of Midwife	Died	
8. Earls Barton	Doctor	Died	
9. Norton	Doctor	Died	

Area.	Present at Birth.	Result.	Remarks.
10. Cransley	B.B.A. of Midwife	Died	Profuse post partum hæmorrhage (1927 death).
11. Duston	Doctor	Recovered	
12. Dingley	Doctor and handywoman	Recovered	
13. Abington	Doctor	Recovered	
14. Kettering	Midwife and Doctor	Recovered	Parametritis (old standing with exacerbation).
15. Finedon	Doctor and handywoman	Puerperal Insanity	Removed to County Mental Hospital.
16. Rothwell	Doctor and handywoman	Recovered	
17. Rushden	Doctor and handywoman	Recovered	
18. Gretton	Midwife	Recovered	Several cases of sore throat in neighbourhood. Infant with purulent discharge of one nostril.
19. Irthlingborough	Doctor and Midwife	Recovered	Ante-partum hæmorrhage
20. Guilsborough	B.B.A. of Midwife	Recovered	
21. Weston-by-Weedon	Midwife and Doctor	Recovered	
22. Broughton	Midwife	Recovered	Septic Pneumonia.
23. Deanshanger	Midwife	Recovered	Child in house with Impetigo.

The cases occurred in :—January (4), February (2), March (1), April (1), May (3). June (2), July (2), August (2), September (1), October (1), November (1), December (3).

The Notification of Puerperal Fever and Puerperal Pyrexia Regulations, 1926, which became operative on October 1st, 1926, makes it obligatory upon medical practitioners to notify forthwith all cases of Puerperal Pyrexia (in addition to cases of Puerperal Fever which were already compulsorily notifiable) to the Local Sanitary Authority.

In the past, failure to notify cases of Puerperal Fever has not been uncommon, and this is due to the fact that Puerperal Fever is ill defined and not a specific disease comparable, say, with Scarlet Fever or Diphtheria. There has been frequently a genuine doubt as to the correct diagnosis, and the issue of the new Regulations making it compulsory for the notification of Puerperal Pyrexia is an attempt to remedy this difficulty. It is considered likely that in the near future the term "Puerperal Fever" will be replaced by the term "Puerperal Pyrexia," the latter being defined in terms which involve no theory as to causation, viz. :—"Any febrile condition (other than a condition which is required to be notified as Puerperal Fever under the Infectious Disease (Notification) Acts occurring in a woman within 21 days after childbirth or miscarriage in which a temperature of 100·4° Fahrenheit (38° Centigrade) or more has been sustained during a period of 24 hours or has recurred during that period.

During the few months in which the Regulations were in force, 11 cases were notified in the County, 6 in the Urban Districts, and 5 in the Rural Districts.

One case died from duodenal ulcer with hæmorrhage 13 days after delivery; the others recovered. They were attended as follows :—Doctor, 6; Midwife, 5.

In the midwives' cases, the following points are of some interest. One had foul green discharge before the birth of her stillborn child. In one case the children had impetigo and the mother was found to have been attending to this up to and subsequent to the birth; in a third case a clot was retained for 8 days and the puerperium was normal after its expulsion. The case quoted above as dying from duodenal ulcer was a midwife's case, and the difficulty of delivery was due to large tumour of the kidney necessitating Cæsarean Section when forceps delivery failed.

Authorities carrying out Maternity and Child Welfare Schemes are empowered under the new Regulations to make provision for the special treatment of women suffering from Puerperal Pyrexia, for consultation with an obstetric specialist, for skilled nursing, or for institutional treatment, and medical practitioners are provided with notification forms on which is printed :—

I desire
- (i.) To have a second opinion on the case ;
- (ii.) To have a bacteriological examination of
  - (a) lochia ;
  - (b) blood ;
- (iii.) That the patient be admitted to hospital ;
- (iv.) That a trained nurse be provided ; or

Facilities are available for all necessary treatment.

The Medical Officer of Health of the local sanitary authority is required to send a copy of all notifications received by him to the County Medical Officer of Health within 24 hours after receipt.

Since December, 1918, the County Council have had *arrangements with the Northamptonshire Nursing Association for the provision of a special nurse in cases of Puerperal Fever, and certain other diseases, on request, and this was extended early in the current year to include cases of Puerperal Pyrexia. (Two cases of Puerperal Fever were nursed in accordance with above arrangements during the year 1926).

The County Council made arrangements in November, 1925, for the provision, free of charge, to medical practitioners requiring it, of anti-streptococcal serum for the treatment of Puerperal Fever occurring *among necessitous women in the Administrative County.*

Where, in the cases referred to, a medical practitioner desires to have a bacteriological examination of the blood, or lochia, this will also be done free of charge. Applications for serum may be made to either the Northampton General Hospital, or the Kettering and District General Hospital, whichever is the more convenient. Bacteriological examinations will be carried out only at the Northampton General Hospital.

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* These arrangements now include the nursing of Measles, Whooping Cough and Diarrhœa in young children, cases of Puerperal Fever and Puerperal Pyrexia, Poliomyelitis and Cerebro-Spinal Fever.

The Public Health Committee have had under consideration during the current year the question of providing the services of an obstetric specialist, and also the making of arrangements with certain hospitals for institutional treatment of puerperal cases ; and while the former has not yet been definitely decided upon, negotiations are practically completed (May, 1927) for institutional treatment to be provided at the Northampton General Hospital ; Stamford, Rutland and General Infirmary ; and the Hospital of St. Cross, Rugby.

ORIGIN OF DISEASES.

Other Accidents and Diseases.—It is known that a high percentage of these deaths are due to the Toxæmias of pregnancy, e.g., Eclampsia, Nephritis, etc. These Toxæmias originate for the most part with disease of the kidneys. Other causes are heart disease, Malformities, Hæmorrhage, etc. The last named is closely associated with diseases of the kidney.

Puerperal Fever.—The cause of this disease is not known definitely. Various organisms have been found in cases of this disease, more especially the Streptococcus, Staphylococcus, Pneumococcus, Aerogenes, Capulatus, B. Coli. and the Gonococcus.

In some cases the disease is due to auto-infection, in other cases the patient is infected by attendants. In my opinion, too, the other occupants of the home, who may be suffering from ulcers and sores, or some other infectious condition, in many cases, constitute a great source of danger.

PREVENTION.

Other Accidents and Diseases.—The most useful method of preventing deaths from these causes can be effected by more efficient nate-natal work. A great number of deaths are due to the Toxæmias of pregnancy which can be prevented by treatment if symptoms are discovered by an early diagnosis. Similarly precautions can be taken if it is known that an expectant mother is suffering from heart disease, contracted pelvis, or some other abnormality.

The fault in the past has not lain merely with the attendant but with the mother herself who is often unwilling to submit to examination early in pregnancy. By education of the mothers with regard to the dangers which might possibly occur and which can be prevented by early treatment one can hope to encourage them to submit to ante-natal examination.

Puerperal Fever.—While it is impossible for me to suggest a definite mode of preventing this disease, I am of opinion that the incidence could be lessened by :—

1. Improvement in the Sanitary condition of the homes, and the efficient arrangements for the confinement.
2. Better precautions as regards disinfection by attendants.
3. Isolation of the patient from any occupant of the house, who is a source of infection. Ante-natal work by midwives might be extended to include these duties.

HEALTH VISITING.

On and after 1st April, 1928, the Minister of Health will not approve the appointment as Health Visitor of any woman taking up Health Visiting for the first time unless she has obtained the Health Visitor's Certificate of the Royal Sanitary Institute. The Minister of Health, however, will approve the appointment of those persons who have commenced a course of training in accordance with the Board of Education Regulations, 1919.

Before obtaining the certificate of the Royal Sanitary Institute the candidate must be a fully trained nurse, hold the Central Midwives Board Certificate and have completed a period of six months training in Public Health work, and for applicants who are not trained nurses it is necessary to undergo a course of training for a period of two years in accordance with the Board of Education's Regulations, 1919, undergo six months training in a Hospital, and hold the Central Midwives Board Certificate.

For both types of candidate it will be necessary to pass an examination conducted by a central examining body.

The position of existing Health Visitors is, however, safeguarded and the Ministry will approve the appointment of any woman who has served satisfactorily as a Health Visitor prior to the 1st April, 1928. The Ministry of Health possess a list of approved health visitors, consequently, in any new appointment, if an applicant does not possess the certificate mentioned above, reference to the Ministry can be made as to her previous experience.

Besides the Superintendent, there were during the year ten whole time health visitors ; in addition to these, one Assistant Superintendent of the Northamptonshire Nursing Association and thirty district nurses act as part-time health visitors in the areas of Brackley, Market Harborough and Towcester.

I regret to inform the Council that one of the health visiting staff, Miss Britton, was fatally injured while riding a motor cycle ; the vacancy was filled by the temporary appointment of Miss Rayner.

Miss Cummins, who worked in the Daventry area, resigned her appointment during the year and Miss Meadley was appointed to fill the vacancy.

The following Table shows the number of visits made by the Health Visitors during the year. :—

WINTER SCHOOL FOR HEALTH VISITORS.—The Superintendent Health Visitor and the Assistant Superintendent of the Northamptonshire Nursing Association were sent by the Committee to the Winter School for Health Visitors, arranged by the Women's Sanitary Inspectors' and Health Visitors' Association, which was held in London from 29th December, 1926, to 11th January, 1927.

TABLE XII.

Summarised Statement of the Health Visitors' Work during the Year 1926.

DISTRICTS.

Whole time Health Visitors. — Dist. Nurse Health Visitors.

No. OF VISITS PAID TO—	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 8	No. 9	No. 10	No. 11		No. 7	No. 12	No. 13	
	Oundle.	Kettering.	Thrapston.	Rushden.	Wellingboro'	Rothwell.	Brixworth.	Earls Barton.	Northampton.	Daventry.	TOTALS	Market Harborough.	Towcester.	Brackley.	TOTALS
Expectant Mothers first time	13	4	65	2	...	...	7	...	31	5	**127**	97	108	133	**338**
Expectant Mothers subsequently	5	2	30	5	...	1	21	...	57	9	**130**	273	183	499	**955**
TOTALS	18	6	95	7	...	1	28	...	88	14	257	370	291	632	**1293**
New Cases, 1st time	164	161	260	275	236	226	170	180	247	224	**2143**	142	152	193	**487**
New Cases, subsequently ...	714	1057	1172	1512	1059	1232	909	912	1050	785	**10402**	273	284	390	**947**
Previous Year Cases on Cards (1925) 2641	1066	710	1900	1039	884	1022	937	831	778	832	**9999**	425	604	673	**1702**
Infants over 12 months ...	1142	1574	1483	1629	879	794	1249	1333	1733	1298	**13114**	1807	2226	2723	**6756**
Stillbirth Enquiries	8	4	4	6	10	3	4	6	3	**6**	**54**	6	11	5	**22**
Visits to Infant Welfare Centres	*	19	10	19	83	42	22	**	4	37	**236**	*	**	6	**6**
Special Cases (under 1 year) ...	7	3	4	14	...	3	...	14	11	5	**61**	15	4	10	**29**
,, (over 1 year) ...	4	1	3	...	...	4	2	1	22	2	**39**	26	2	17	**45**
Special Visits *re* Free Milk or Medical Fees	19	70	6	28	1	23	11	19	22	3	**202**	10	6	5	**21**
Social Work	12	...	27	...	...	7	10	16	22	11	**105**	...	...	...	...
Mentally Defectives	21	24	41	20	70	19	14	18	30	25	**282**	19	23	4	**46**
Boarded-out Children ...	...	...	...	...	...	...	...	...	...	65	**65**	...	7	...	**7**
Board of Guardians Meeting	...	...	...	...	...	...	...	...	...	2	**2**	...	...	...	...
Tuberculosis Cases	93	79	128	193	4	81	80	87	125	84	**957**	37	62	118	**217**
TOTALS	3250	3702	5038	4735	3226	3459	3408	3417	4047	3379	**37631**	2760	3381	4144	**10285**
TOTAL NUMBER OF VISITS ...	**3268**	**3708**	**5133**	**4742**	**3226**	**3460**	**3436**	**3417**	**4135**	**3393**	**37918**	**3130**	**3672**	**4776**	**11578**

* No Centre. ** H. V. does not attend Centre.

BRITISH MUSEUM
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OCT

Baby Week.—The Health Visitor for Wellingborough was sent as a delegate to the Baby Week Conference, held under the auspices of the National League for Health, through the kindness of the voluntary Committee of the Infant Welfare Centre.

Tuberculosis Visiting.—Two Tuberculosis Nurses having retired, visitation of Tuberculosis patients was added to the duties of the Health Visitors. The increase in work was met by the appointment of an additional temporary health visitor (who took up duties in January, 1927) and a reduction of the areas in each of the previously existing Health Visiting districts.

Boarded Out Children.—Visiting for the Potterspury Board of Guardians is done by the Northamptonshire Nursing Association, and for the Daventry Guardians by the County Council Health Visitor, who attends meetings when required.

Feeding of Infants.—The percentage of infants wholly or chiefly breast fed and wholly artificially fed is as follows :—

	Breast fed.	Artificially fed.
Health Visitors' areas ...	85·78 per cent.	14·22 per cent
Nurse-midwives' areas ...	85·43 ,,	14·57 ,,

Hand feeding by :—

Boat shaped bottles	893
Medicine bottles	18
Cup and spoon	37
Long tubed bottles	3

Maternity and Child Welfare Centres.

The Northamptonshire Nursing Association are responsible for the administration of the Maternity and Child Welfare Centres in the County. During the year a new centre was opened at Grendon, making the total number of centres 12. All the centres are attended by local general practitioners, with the exception of Wellingborough which is attended by the Lady Assistant County Medical Officer. The attendance at some of the smaller centres does not justify the regular visits of medical practitioners. There are many larger areas where no centres have been established.

It has been suggested that the County Council should be responsible for the administration of the Maternity and Child Welfare Centres in the County.

In the joint report of the Secretary for Education and County Medical Officer of Health on the Co-ordination of Health Agencies, it is proposed that additional centres be formed at the following places :—

Wellingborough
Rushden
Irthlingborough
Rothwell
Desborough
Finedon
Raunds
Daventry
Burton Latimer
Higham Ferrers
Oundle
Earls Barton
Long Buckby
Towcester
Brackley
Wollaston
Weedon
Thrapston
Woodford Halse (or Byfield)
Corby
Woodford, Thrapston
Brixworth
Bozeat
Weston Favell
Kings Sutton
Deanshanger

As soon as staff permits a second fortnightly centre should be started at Wellingborough, and Rushden should become a fortnightly centre. Centres should also be established at

Irchester
Moulton
Duston
Kilsby with Crick
Middleton Cheney
Kings Cliffe
Braunston
Broughton
Byfield (or Woodford Halse)
Silverstone

The order is that of population.

The following Tables show the attendances at the various Centres in the County.

INFANT WELFARE CENTRES.

Name of Centre.		Average No. of Infants attending per session.	Average No. of Consultations per Doctor's attendance.	Attendances by Doctor.	Sessions.
Burton Latimer	...	34	5	17	20
Cranford ...	...	13	11	8	11
Cold Ashby...	...	18	11	10	23
Daventry ...	...	16	16	13	25
Desborough	...	7	8	21	23
Grendon (a)	...	7	5	6	12
Harleston ...	...	19	3	6	8
Irchester ...	...	11	4	15	19
Long Buckby	...	17	4	4	15
Rothwell ...	...	21	9	11	18
Towcester ...	...	9	1	17	17
Wellingborough	...	19	17	23	41

(a) Opened 28th May, 1926.

ANTE-NATAL CENTRE.

Name of Centre.		Average No. of expectant Mothers attending per session.	Average No. of Consultations per Doctor's attendance.	Attendances by Doctor.	Sessions.
Wellingborough	...	7	7	11	11

ULTRA VIOLET RAY TREATMENT.

Name of Centre.		Average No. of Infants attending per Session.	Attendances by Doctor.	Sessions.
Wellingborough	...	5	15	41

A Carbon Arc lamp was provided at Wellingborough Centre by the Voluntary Committee on 18th March. It has been used chiefly for the treatment of cases of Marasmus and Rickets with very satisfactory results. The mothers themselves hold the babies during the treatment, and have frequently volunteered the statement that they feel much better after a dose. The improvement in the children is marked. Mothers state they sleep better, grow more lively and take more interest in life. One case of Rickets, aged 3 years and unable to sit up, walked after six doses. The Health Visitor manages the lamp, and the children are examined at frequent intervals by the Medical Officer. All cases are seen by the Medical Officer before beginning treatment. In all, 34 cases were treated between March and December.

MIDWIVES AND MATERNITY HOMES ACT, 1926.

This Act amends the Midwives' Acts, 1902 and 1918.

PART I.—Section 1 amends Section 1 (2) of the Act of 1902, in order to remove the difficulties experienced in preventing the practise of midwifery by unqualified persons.

(a) It is no longer necessary in order to secure conviction to prove that an uncertified woman has attended women in childbirth habitually and for gain.

(b) It is now necessary to have " personal supervision " as well as " direction " of medical practitioners.

(c) Male persons as well as women are brought within the powers of the Act.

(d) Uncertified persons are not liable to conviction if proof is given that the case was urgent.

(e) This does not apply to students.

Section 2 (1) amends Section 6 (2) of the 1918 Act by giving a midwife, liable to be a source of infection and suspended from practising, a right to recover compensation.

Section 2 (2) amends Section 14 (2) of 1918 Act by requiring medical practitioners called in by midwives to send the claim for payment of fees within two months of the date on which they were called in.

Section 2 (3) empowers Local Supervising Authority to arrange whereby an expectant mother, by paying a fixed sum, can insure against liability of medical fees under Section 14 (4) of 1918 Act.

Section 4 enables the Central Midwives Board to make a rule *re* wearing of badges by midwives.

Re Section 1. Since the transference of the Notification of Births Act to the County Council, all uncertified persons practising midwifery will be known to the County Medical Officer of Health through enquiries made into births registered which have not been notified. Should it become necessary to take any action, a report will be made to the Committee.

It is the duty of the General Medical Council to inform General Practitioners of Section 1 (b).

Re COMPENSATION TO MIDWIVES.—In the majority of cases, no suspension of practice is enforced, but the midwife merely asked to disinfect herself and equipment.

There are cases, however, where—

(a) The midwife continues in charge of a septic case and is prevented by the Local Supervising Authority from attending other confinements for which she has been engaged and for which a locum has to be engaged.

(b) The midwife discontinues nursing a septic case during the puerperium and after disinfecting attends to her usual practice and engages a midwife to pay the usual visits during the puerperium of the septic case.

It has been decided by the Public Health Committee that each application for compensation shall be considered on its merits.

Re INSURANCE AGAINST LIABILITY OF MEDICAL FEES.—A scheme of Insurance was submitted by the County Medical Officer of Health but the Public Health Committee decided to take no action for the present.

MATERNITY HOMES.—Part II. of the Midwives' and

Maternity Homes Act, 1926, provides for the registration and supervision of Maternity Homes :—

1. It is an offence for a person to carry on a Maternity Home unless the person is registered in respect of that Home, on and after January 1st, 1927. Registration fee 5s., application to be made to the Local Supervising Authority. Penalty £50, or imprisonment.

Exemption can be made by the Local Supervising Authority in respect of hospitals in charge of medical practitioners, or any hospital or institution not carried on for profit and not used mainly as a Maternity Home. The Local Supervising Authority is empowered to withdraw exemption.

2. Power is given to the Local Supervising Authority to make *Byelawswith respect to records of patients,and children born in Homes, and children removed other than to parents or guardians, or relatives, and also in respect of notification of deaths.

This part of the Act comes into force on January 1st, 1927.

The expression "Maternity Home" means any premises used or intended to be used for the reception of pregnant women, or women immediately after childbirth, with certain exceptions. This definition is a wide one and under it one must include, amongst others

(1) A midwife in practice who also takes in patients.

(2) A person who takes in unmarried mothers for confinement, and practices child farming.

(3) Homes carried on by unqualified persons.

In the County there are two recognised Maternity Homes

(1) Queen Victoria Nursing Institution, Northampton, which comes under the jurisdiction of the County Borough Authorities.

(2) Kettering General Hospital, where a qualified medical practitioner is in charge, and which may be exempted from the provisions of the Act.

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* Byelaws are now in force in this County (May, 1927).

In addition to the above, 8 midwives in the County are known to admit cases for confinement. In the latter cases, strict enquiries will have to be made as to the qualifications, character, etc., of the person in charge, and also into the qualifications of the person, if any, left in charge when the midwife is doing her usual practice, before Registration is approved.

MATERNITY HOMES.—A sum of £200 was included in the estimates for the purpose of sending patients to Maternity Homes. Arrangements have been made with the Queen Victoria Nursing Institution for the admission of patients at a fee of £4 10s. 0d. per case per week during and after confinement, and £2 2s. 0d. per case per week pending confinement. The Kettering General Hospital agreed with the Kettering Urban District Council and the County Council to provide a Ward of 10 beds for the reception of midwifery cases ; the allotment of beds was in the proportion of 6 for the Kettering Urban District and 4 for the County. For the retention of 4 beds the County Council are asked to pay at the rate of £208 per annum, and in addition £2 10s. 0d. per week is charged for each bed occupied. The Ward, however, was not ready for occupation during the year.

Maternity Homes and Hospitals are intended for those mothers who have either insufficient accommodation at home, or are suffering from some abnormal condition such as contracted pelvis, eclampsia, ante-partum hæmorrhage, etc.

During the year, 15 cases were admitted to the Queen Victoria Nursing Institution Maternity Home, Northampton, under the County Council Scheme for assistance in such cases. Patients are admitted only on the certificate of the County Medical Officer of Health, and the husband or patient is required to contribute towards the cost of maintenance an amount decided upon by a special sub-committee after enquiries into the financial circumstances of the family.

INSPECTION OF MIDWIVES.

The following inspections were made during the year :—

By the Superintendent of the Northamptonshire Nursing Association	89	
By the Assistant Medical Officer of Health	519	Routine inspections.
	25	Special investigations.
	1	Inspection of Maternity Home.
	634	

Of the total births registered in the County (3,393), 47·39 per cent. (1,608) were attended by midwives (as against 49·74 per cent. in 1925, 50·7 per cent. in 1924, 54·7 per cent. in 1923, and 51·9 per cent. in 1922).

The position as regards midwifery service was as follows :—

Notified intention to practice	153
(Trained 141—8 being County Council Scholars—others 12)	
In practice at end of 1926	117
Left the County	20
Temporary	13
Ceased to practice	2
Certificate cancelled	1

FEEDING OF INFANTS.—Of 1,608 live infants, 15 died before feeding, the remaining 1,593 were :—Breast fed, 95·7 per cent; partly breast and partly artificially fed, 1·6 per cent. ; artificially fed 2·7 per cent.

The reasons for artificial feeding in the 36 notifications received were given by the midwives as follows :—

Insufficient or no milk	11
Illness of mother (Debility 2, Eclampsia 2, Tubercular 2, Puerperal Mania 1, Puerperal Fever 1)	8
Infant not thriving	4
Mother going to work	4
Doctor's advice	2
Deformed nipples	2
Mother removed to Hospital	2
History of breast abscess	1
Operation to breasts	1
Mother's milk unsuitable (baby ill)	1
	36

Medical aid was summoned as follows :—

MOTHERS.

PREGNANCY—

Ante-partum hæmorrhage	12	
Miscarriage or abortion	10	
Albuminuria, suspected Eclampsia, and puffy hands and face	5	
Varicose veins	3	
Vaginal discharge	2	
Excessive vomiting	1	
Varicose ulcers	1	
		34

LABOUR—

Torn perinæum	81	
Delayed labour	73	
Abnormal presentation or presentation not made out	18	
Adherent or retained Placenta	16	
Uterine inertia	7	
Post-partum hæmorrhage	4	
Collapsed condition of mother	2	
Stillbirth	1	
Fainting and shivering during labour	1	
Complicated midwifery	1	
Patient insists upon having doctor	1	
		205

LYING-IN—		
Rise of temperature	18	
Illness of mother	10	
Abdominal pain	1	
Pain in left leg, 10th day	1	
Excessive loss after 10th day	1	
Swollen breasts	1	
Vomiting after delivery	1	
Difficult and painful micturition	1	
Unsatisfactory progress after labour ...	1	
	—	35
MOTHERS AND INFANTS.		
Torn perinæum and feeble infant ...	3	
Retained placenta and Anencephalus ...	1	
Adherent placenta and macerated fœtus ...	1	
	—	5
INFANTS.		
Discharge from or inflammation of the eyes	32	
Feebleness of Infant	20	
Deformities	7	
Pemphigus (3) and suspected Pemphigus (2)	5	
Feverishness of Infant	1	
Jaundice	1	
Baby's arm broken	1	
*Infant found dead	1	
Cyanosis	1	
Convulsions	1	
	—	70
		349

Three NEW MIDWIFERY AREAS were formed for the following parishes :—

1. Pattishall and Cold Higham.
2. Ringstead, Great and Little Addington.
3. Bugbrooke and Kislingbury.

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* Born before Midwife's arrival.

The Committee agreed that the Assistant Medical Officer should attend the Conference of the Association of Inspectors of Midwives but this was abandoned owing to the General Strike, with the exception of the Annual Meeting, which was held on November 27th.

FREE MILK.—The Sub-Committee appointed to deal with this matter granted milk as follows :—

URBAN DISTRICTS.

	Pts.	lbs. (dried)
Brackley Borough	—	—
Daventry ,,	112	6
Higham Ferrers ,,	28	—
Burton Latimer	449	30
Desborough	928	18
Finedon	1181	—
Irthlingborough	115	—
Oundle	—	—
Raunds	460	24
Rothwell	1405	48
Rushden	691	12
Wellingborough	409	—
	5778	138

RURAL DISTRICTS.

	Pts.	lbs. (dried)
Brackley	191	—
Brixworth	2417	48
Crick	—	—
Daventry	576	72
Easton-on-the-Hill	196	—
Gretton	—	—
Hardingstone	961	12
Kettering	1038	78
Middleton Cheney	28	—
Northampton	643	12
Oundle	692	—
Oxendon	56	12
Potterspury	—	—
Thrapston	1193	30
Towcester	720	—
Wellingborough	1502	6
	10213	270

MENTAL DEFICIENCY ACT, 1913.

The powers of the County Council under the Mental Deficiency Act, 1913, have been delegated to the Committee for the care of the Mentally Defective which is not a Sub-Committee of the Public Health Committee.

Twelve cases were examined by the Lady Assistant Medical Officer of Health with a view to deciding whether or not they were mentally defective; 7 of these were examined with a view to certification and 6 were certified. Eight cases were removed to institutions, and one to guardianship. One hundred and nine cases were under supervision by the Health Visitors; one died and one removed from the County.

BLIND PERSONS ACT, 1920.—Powers under this Act have been delegated to the Committee for the Welfare of the Blind which is not a sub-Committee of the Public Health Committee.

VENEREAL DISEASES.

TREATMENT.—The arrangements made with the Northampton General Hospital for the diagnosis and treatment of patients suffering from Venereal Diseases have been continued.

The parties to the arrangements are the Counties of Northampton and Buckingham and the County Borough of Northampton.

The total number of new County cases attending for treatment at the Centre during the year was 71 as compared with 78 for 1925. The total attendances at the out-patient clinic were 1,146 as compared with 1,358 for 1925. The number of persons discharged after completion of treatment was 108 as compared with 11 for the year 1925. The number who ceased without completing treatment or before the final test as to cure was 145 as compared with 8 for 1925. The number of persons treated with Salvarsan Substitutes was 106 as compared with 117 for 1925.

It will be noted in the table overleaf that there was a large increase in the number of persons discharged after completion of treatment and also in the number who ceased to attend without completing treatment. These increases are the direct result of a visit to the Hospital of one of the Inspectors of the Ministry of Health who discovered that the Registers were not entered up-to-date and contained the names of many patients which should have been removed.

It was found necessary to re-pay the travelling expenses of 14 persons from the County who attended the Venereal Diseases Clinics. In all the sum expended during the financial year amounted to £34.

The following table supplies information as to new County cases and attendances, &c., during the three years 1924-1926—

	1924		1925		1926	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
1. No. dealt with at or in connection with the Out-patient Clinic for the first time	58	17	53	25	48	23
2. Total attendances of all persons at the Out-patient Clinic	1,364	546	1,002	356	758	388
3. No. discharged after completion of treatment ...	17	1	9	2	60	48
4. No. who ceased to attend without completing treatment	5	1	8	...	88	57
5. No. of persons treated with Salvarsan substitutes ...	133	56	74	43	60	46

By the end of the year the following pathological examinations had been made at the Pathological Laboratory of the Hospital, and numbered 376, as against 446 in the year 1925.

Nature of Tests.	No. of Tests.	
For Detection of Spirochetes	For Treatment Centre ...	3
	For Practitioners ...	1
For Detection of Gonococci	For Treatment Centre ...	139
	For Practitioners ...	45
For Wassermann reaction	For Treatment Centre ...	81
	For Practitioners ...	107
Other Examinations	For Treatment Centre ...	0
	For Practitioners ...	0
	Total ...	376

There were 11 medical practitioners in the County, inclusive of the two Medical Officers of the Treatment Centre, scheduled as being qualified to receive free samples of salvarsan substitutes during the year 1926—the same number as in the preceding year—and supplies were sent to them at their request in respect of five cases, as in the year 1925.

PROPAGANDA.

Arrangements were made with the British Social Hygiene Council for ten days propaganda by means of lectures and a display of films in the County. Before the lectures were given, one of the Council's Organisers visited the County to make preliminary arrangements. Although the lectures and films were much appreciated, one must criticise adversely the preliminary organisation, as in many instances arrangements for advertising, etc., were insufficient.

The following is a report of the meetings held :—

Monday, Nov. 29th. KETTERING CORN MARKET HALL.

3.0 p.m., Women only. Speaker, Mrs. Altentop.
Film, "The Gift of Life." Present 50.

7.0 p.m., Men and Women, followed by Meeting for Men only.
Films, "The Public Health Twins at work," "Whatsoever a man soweth," followed by lecture "V.D. for Men." Present 150. Speaker, Mr. Kohan.

Tuesday, Nov. 30th. DESBOROUGH CO-OPERATIVE HALL.

3.0 p.m., Women only. Meeting abandoned, only 4 present.

7.0 p.m., Temperance Hall, Men and Women, followed by Meeting for Men only. Films as on Monday. Present 250. Speaker, Mr. Kohan.

Wednesday, Dec. 1st. LONG BUCKBY CO-OPERATIVE HALL.

3.0 p.m., as on Monday. Present 20. Speaker, Mr. Kohan.

7.0 p.m., as on Monday. Present 50.

TABLE XIII.

TABLE SHEWING DISTRICT RETURNS OF HOUSING PROGRESS FOR THE YEAR 1926.

DISTRICTS.	By Local Authority under Housing Scheme.			By Private Enterprise.				
	Houses completed during 1926	Houses in course of erection during 1926	Prospective Houses.	Houses completed during 1926		Houses in course of erection during 1926.		Prospective Houses.
				Subsidy.	Non-Subsidy.	Subsidy.	Non-Subsidy.	
URBAN.								
Brackley Borough	...	...	...	11	...	...	...	...
Daventry Borough	...	...	8	...	...	...	...	...
Higham Ferrers Borough	18	22	...	18	...	19	...	1
Burton Latimer	...	...	20	6	...	5	...	2
Desborough	12	...	...	16	1	7	...	10
Finedon	19	56	8	18	...	20	1	...
Irthlingborough	28	2	...	5	3	1	...	...
Kettering	67	34	4*	59	17	14	7	21
Oundle	...	...	...	...	2	...	1	...
Raunds	8	...	15	4	...	1	...	...
Rothwell	15	13	...	16	5	9	1	12
Rushden	35	71	32	21	1	34	6	5
Wellingborough	38	6	...	51	11	44	5	16
RURAL.								
Brackley	...	...	...	2	3	...	...	6
Brixworth	...	10	...	19	1	29	1	...
Crick	...	...	...	2	1	...	...	1
Daventry	...	26	28	13	2	4	2	3
Easton-on-the-Hill	...	...	...	...	...	...	...	...
Gretton	...	...	12	...	...	...	...	...
Hardingstone	...	...	...	14	2	...	...	...
Kettering	...	60	8	21	6	14	2	17
Middleton Cheney	...	...	...	...	3	...	...	2
Northampton	33	32	44	31	24	40	8	12
Oundle	4	4	...	2	...	2	2	...
Oxendon	8	...	8	1	...	...	...	1
Potterspury	...	...	2	2	...	...	4	2
Thrapston	...	...	6	10	...	7	...	9
Towcester	...	...	...	8	4	...	1	...
Wellingborough	34	10	78	8	2	4	3	...
TOTALS	319	346	273	358	88	254	44	120

* Also two blocks of two Shops and eleven Flats each.

Thursday, Dec. 2nd. WEEDON MILITARY BARRACKS.

5.45 p.m. Speaker, Mr. Kohan. Film shown "V.D. for Men." Present 200.

7.0 p.m., Globe Assembly Hall, as on Monday. Present 100.

Friday, Dec. 3rd. TOWCESTER TOWN HALL.

3.0 p.m., and 7.0 p.m. as on Monday. Present 50 and 250.

Monday, Dec. 6th. WELLINGBOROUGH CENTRAL HALL.

7.0 p.m., Men and Women, as on Monday, Nov. 29th. Present 60.

Tuesday, Dec. 7th. WELLINGBOROUGH CENTRAL HALL.

3.0 and 7.0 p.m. Speaker, Miss Peto and Mrs. Herbert Jones. Present 40 and 120.

Wednesday, Dec. 8th. RUSHDEN B.W.T.A. HALL.

As on Monday. Nov. 29th. 3.0 p.m. Present 100. 7.0 p.m. Present 140.

Thursday, Dec. 9th. IRTHLINGBOROUGH HARMONIC HALL.

3.0 and 7.0 p.m. as on Monday, November 29th, Afternoon 40, Evening 180.

Friday, Dec. 10th. DAVENTRY PICTURE HOUSE.

3.0 and 7.0 p.m. Afternoon 50, Evening 100.

Total Meetings, 27 ; Total number present, 1,950.

HOUSING.

As in the previous year, the number of houses erected by private enterprise was in excess of those built under Housing Schemes of Local Authorities, being 446 as against 319, as compared with 511 and 106 respectively for the year 1925. Houses were erected either under Housing Schemes or by private enterprise in all but the following Districts, viz. :—Daventry Borough, Easton-on-the-Hill and Gretton Rural Districts. The Districts with the largest number of completed houses during the year were Kettering, Wellingborough and Rushden Urban Districts, Northampton and Wellingborough Rural Districts. The attached Table shows for each District of the County the extent to which provision of housing accommodation was accomplished or was in contemplation at the end of the year 1926.

The number of houses in the Rural Districts which were notified under Section 25 of the Housing Act, 1925, amounted only to seven, as against 25, 10 and 23 in the years 1925, 1924 and 1923 respectively. Of these seven houses, two were repaired (Clipston and Welford), Closing Orders were made in four cases (Polebrook 1, Stoke Albany 1, and Middleton Cheney Rural District 2) and in one case (Flore) a Demolition Order was made.

WATER SUPPLY.

Several of the Annual Reports of District Medical Officers of Health have not yet been received, but the following information has been taken from those to hand :—

BURTON LATIMER URBAN.—The old gas engines to drive the pumps at the Water Works have been discarded, and an electric engine installed which it is expected will effect a considerable saving.

DESBOROUGH URBAN.—About September, the total supply was found to be diminishing, possibly owing to the low rainfall, and to rectify the deficiency an available spring at the No. 2 station was utilized, yielding 7,000 gallons per day.

KETTERING URBAN.—Considerable progress was made in water waste detection, and notwithstanding the large number of houses added, in addition to a 3-inch supply to the new model dairy, a reduction of over 3,000,000 gallons of water per week has been effected. A new petrol engine and pump have been installed at Cransley in case either of the present centrifugal pumps with electric motors break down.

MIDDLETON CHENEY RURAL. MIDDLETON CHENEY.—A scheme for works of water supply has been approved by the Ministry of Health, after the holding of an Inquiry, and the Council are negotiating with various owners of land affected.

POTTERSPURY RURAL.—At Old Stratford, a system of public water supply was installed, which it is hoped to have completed early in 1927.

CONTRIBUTORY PARISHES OF PASSENHAM, FURTHO AND COSGROVE.—A Ministry of Health Inquiry was held in March for sanction to loans of £677, £95, and £1,128, respectively, for works of water supply for above parishes. The scheme was approved. The reservoir and pumping plant have been erected, the laying of the mains is proceeding, and the scheme is expected to be completed by the beginning of March, 1927.

THRAPSTON RURAL. ISLIP.—A trial well has been dug, but the results are not yet known.

THRAPSTON.—A Ministry of Health Inquiry was held in July in connection with an application for a loan for works of water supply. The application was approved, and sanction given in respect of £500 for trial well as preliminary to main scheme. The trial well is in course of being sunk.

WOODFORD.—A Ministry of Health Inquiry was held in July in connection with a scheme for an additional water supply for the parish. The sanction of the Ministry was refused on the grounds of inadequacy of the scheme.

TOWCESTER RURAL. TOWCESTER AND COLD HIGHAM.—A second pumping engine has been installed to deal with the intermission to the flow to part of the parish of Towcester, and plans are in course of preparation for the extension of the supply to Cold Higham.

RIVERS POLLUTION.

No complaint was received during the year in respect of pollution of rivers or streams.

SEWERAGE AND SEWAGE DISPOSAL.

As before stated, several of the Annual Reports of District Medical Officers of Health have not yet been received, but from those to hand the following information has been obtained :—

Desborough Urban.—An earth bank with a half-round stone bare channel pipe has been constructed at the Sewage farm, in place of the dilapidated wooden trough used as a carrier for the storm water overflow, to ensure the whole of the storm water being conducted to the land reserved for its treatment.

Kettering Urban.—One old sewer was replaced by a new one, and three 30 feet sewer pillar ventilating shafts were fixed. It is proposed to overhaul and re-ventilate the whole of the sewers with up-to-date ventilating shafts.

Hardingstone Rural. Milton.—An inquiry was held by the Ministry of Health for sanction to a loan for works of sewerage. The application for sanction to borrow was adjourned, as the Ministry of Health expressed a strong desire to have the water supply made efficient before the question of sewerage was dealt with.

Middleton Cheney Rural. Middleton Cheney.—The Ministry of Health refused to approve, after holding of an Inquiry, scheme for works of sewerage and sewage disposal.

Oxendon Rural. Braybrook.—A new scheme for sewer outfalls has been adopted.

Thrapston Rural. Islip.—An application in respect of a loan to construct an additional sewage disposal system was refused by the Ministry of Health, after the holding of an Inquiry, on the grounds of the inadequacy of the proposed system.

Towcester Rural. Blisworth.—A Ministry of Health Inquiry was held in January for sanction to a loan for works of sewerage and sewage disposal. The application was granted, and the complaints of the previous year as to the fouling of the stream by the overflow from the settling tanks and filters will, no doubt, be obviated when the scheme is completed.

MILK.

THE PROBLEM OF OUR MILK SUPPLY.

Milk contains all the constituents of a satisfactory food, in well balanced proportions, including the vitamins which are essential to health.

In spite of milk being an ideal food, however, there are certain disadvantages which must be considered.

FIRST.—Milk is an inconvenient food, in that its bulk is unwieldy and necessitates a perfect transport organisation. Milk is not only an admirable food for man, but is also an excellent culture medium for the lower forms of life, such as bacteria and moulds. The rapid growth of the putrefying and souring bacteria, with which milk is so readily infected, necessitates highly specialised and elaborate arrangements for its transport and distribution. The Dairy Milk supply to a large town is one of the highest achievements of modern transport.

SECONDLY. Milk is a dangerous food. While a great deal of importance has been attached to the amount of fat in milk, very little effort has been made, until recently, to ensure that our Milk Supply is free from dirt and bacteria. The amount of fat in milk varies according to the time of milking and also the month of the year. The average composition of 36,438 samples of milk taken in a large city recently showed a steady decrease in the fats from 3·85 per cent. in November to 3·4 per cent. in June, and a steady rise from 3·4 per cent. in June to 3·85 per cent. in November.

Milk possesses drawbacks even more serious than its inconvenience and its instability. Unfortunately, it is an excellent medium for bacteria causing diseases as well as for those causing putrefaction and souring. Milk has been proved to be the source of epidemics of Scarlet Fever, Typhoid, Diphtheria, Infectious Sore Throat, Epidemic Diarrhœa, Dysentery, Cholera and Malta Fever. Malta Fever is, of course, prevalent in Malta, where the milk from goats is commonly consumed. These diseases are generally spread owing to a patient or carrier infecting the milk directly, e.g., by milking with infected hands, or coughing into the milk, or by the use of unclean receptacles. It must not be forgotten, also, that often the consumer is to blame by exposing the milk, after purchase, to flies and dirt, and also placing the milk in unclean receptacles.

It is chiefly, however, in the spread of Tuberculosis among children that milk from infected cows has become a serious danger to the Public Health.

It is estimated that 25-30 per cent. of the Milch Cows of this Country suffer from Tuberculosis and that there are approximately one million cows with Tuberculosis in this Country.

It was stated by the Chief Government Veterinary Inspector at the Washington Conference that there are ten times the number of Tuberculous cattle in this Country than in America.

It is estimated that 10 per cent. of milk contains the Tubercle bacillus, while 6 per cent. of butter and 5 per cent. of cheese in New York contain Tubercle bacilli.

Formerly, some doubt existed as to the susceptibility of the human being for Tuberculosis of Bovine origin ; that is that human beings could be infected by Bovine Tubercle bacilli.

It was a significant fact that out of 60,000 people who died each year from Tuberculosis, 11,000 were children under 5 years whose diet mainly consisted of cow's milk.

At the National Conference held in London in 1922, Dr. Stanley Griffiths, bacteriologist to the Medical Research Committee, proved the following :—

1. Bovine Tubercle germs play a great part in the causation of all Clinical types of Human Tuberculosis in every organ, indistinguishable from those caused by the Human Tubercle germ.

2. The frequency with which Bovine Tubercle germs occur in humans varies as the age. It is highest in children under 5 and in those forms of Tuberculosis which affect glands and abdomen. In fact, in such forms of Tuberculosis the percentage of Bovine infection in children under 5 years exceeds 80 per cent. It is estimated that of the total deaths at all ages, Bovine Tuberculosis causes 6·44 per cent. or 3,000 deaths a year. In addition to deaths, one has to consider the large number of cases who do not die, but are crippled and disabled.

There is a school of Medical men which tells us that as Bovine Tuberculosis is less virulent than Human Tuberculosis, the drinking of infected Milk renders an immunity to the more virulent Human Type.

The supporters of these views have up to the present produced no evidence and not proved their points.

There is no evidence that Bovine Tuberculosis is less virulent than the human type. No doctor on examining a deformity would say this is probably of Bovine origin because it is not a severe lesion. In fact, in animals the Bovine type is more severe than the human, and in monkeys—the nearest animal to man—the virulence is about equal.

It is not sufficient evidence to say that Tuberculosis of the Pulmonary organs, generally caused by human germs, is more severe than Tuberculosis of a bone or joint generally caused by Bovine germs, as the entry of the germ is usually different, one entering by the Pulmonary and the other by the Digestive System. It is possible that less germs are needed to cause disease by the Pulmonary tract than by the Digestive tract. Reliable proof could only be obtained by giving equal doses of human and Bovine germs through the same tract.

Even if they are correct in their views, no one is justified in recommending a child to drink milk containing Tuberculous germs in variable and unchecked doses.

If immunisation against human Tuberculosis is to be obtained by dosing with Bovine germs, then it should at least be done by graded and known amounts.

As a theory it might be good, but as an unproved fact it is dangerous.

In addition to the germs or invisible dirt in milk, there is also the visible dirt.

One has only to filter the ordinary milk sold in a dairy to demonstrate visible dirt. It consists to a certain extent of manure. While no one would be prepared to purchase a joint of meat which was unclean yet there are millions of people who buy milk containing filth.

The *man in the street* appears to be content to purchase in the jug what he will not accept for nothing in water from the tap.

HOW GERMS AND DIRT ENTER THE MILK.

1st. DIRECTLY FROM DISEASED COWS. Anthrax, Foot and Mouth disease, Pneumonia (these are rare) Tuberculosis and sore throats, are examples of diseases transmitted to humans through milk from diseased cows.

2nd. DURING MILKING. Through

(a) Dust and Manure entering Milk from dirty buildings.

(b) Manure and Dirt entering Milk from dirty cows, with flanks, udder and teats ungroomed and unwashed.

(c) Dirt from the hands and clothes of milkers.

(d) Germ from milkers suffering from Tuberculosis, Diphtheria, Enteric Fever, etc.; from milkers coughing into Milk, or milking with hands infected by contact with Typhoid germs, etc.

(e) The use of dirty buckets, churns, and other utensils.

(f) Dirty water infected with germs like enteric, used for washing the cows or utensils, or hands of milkers.

(g) Through infection by flies.

3rd. DURING TRANSIT TO RETAILERS. Dust and dirt enter if the churns have not been properly constructed.

4th. DURING RETAILING. Through

(a) Dirty utensils.
(b) Dirty and infectious employees.
(c) Dust and flies entering open cans.

5th. AT CONSUMERS. Through

(a) Dirty utensils.
(b) Dirty homes.
(c) Milk left in open utensils exposed to dirt, dust and flies.
(d) Infected inmates of the house.

Clean milk can be produced cheaply, without any expensive structural alterations. All that is needed is soap, clean water, and instruments for grooming the cows, and a sterilizing plant for utensils.

Naturally, clean cowsheds help enormously in preventing dirt from entering milk.

However difficult and expensive it may be, it should be our aim to clear our herds of infectious cattle.

Tuberculosis in cattle is the most important part of the problem. Regular inspection by Veterinary Surgeons is essential in any scheme.

Of the Tuberculin tests, the double intradermal is the best, provided there is good Tuberculin and the method of application is perfect.

While the Tuberculin test may be drastic, in that a cow with a positive result does not necessarily suffer from Tuberculosis of the udder and produce Tuberculosis milk, yet a positive result is useful in ultimate production of herds free from Tuberculosis.

All cows which give a positive reaction to the Tuberculin tests should be isolated from the rest of the herd.

A calf is not born with Tuberculosis, and if a calf from a cow having a positive reaction is removed immediately from its mother and fed on milk known to be non-tubercular it can be reared healthy.

The alternative proposal, to render milk safe before consumption, by heating, has caused a great deal of controversy. As to the temperature necessary to destroy Tubercle bacilli which are the most resistant of germs likely to be present, exposure to a temperature of 145° F. (62·5° C.) for 30 minutes will destroy germs of Tuberculosis.

Pasteurisation means the process by which milk is raised to a temperature of 145° F. for 30 minutes and then cooled rapidly.

The production of pasteurised milk should be kept under constant supervision and be subject to continual inspection. An indifferent pasteurising plant, or careless employees, will cause a great deal of trouble, as purchasers will buy the milk as the perfect article, and will not take the precautions they would have taken with untreated raw milk. Investigations are now being undertaken as to the effect of heat on the nutritive value of milk. If milk is heated once to the proper temperature, no great harm will be done.

Heating to boiling point, prolonged or repeated heating, will cause change in the milk by

(1) Destruction of Vitamins.

(2) Precipitation of the Calcium Salts.

(3) Alteration in condition of proteid and fats.

One has reason to believe that a general supply of Grade A Milk is likely to be available throughout the Country in a short time. In fact Grade A. Milk will soon be the rule rather than the exception.

A producer of Grade A. milk in a district has a most beneficial influence on other producers in his neighbourhood. Bottled milk not labelled Grade A. is not necessarily clean, as sometimes the milk is less clean than that sold in churns, but the bottle gives the consumer a false idea of security.

Herds free from Tuberculosis will not be obtained for many years, and while our ideal must not be lost, we must consider the health of the children and adults of this generation. In the meantime, the production of Grade A. Milk, pasteurised, is recommended.

Ninety-eight per cent. of all the great cities of America have pasteurised milk only, by law, and as a result Surgical Tuberculosis has been decreased in New York by about one-third; it is stated that it is difficult to find a child with Tuberculosis of Glands in New York city.

It has already been stated that there is reason to believe that it will not be long before we have a general supply of clean milk. This optimism is based on figures supplied to the National Clean Milk Conference in November, 1926.

The number of tests made for granting Certificates for Certified and Grade A. (Tuberculin tested) milk in 1924 was 11,110, and in 1925 14,572 ; of these samples the following passed, in 1924, 92·64 per cent. and in 1925, 93·71 per cent.

The Licences granted under the Ministry of Health Authority were 55 in 1921, 181 in 1922, 1,020 in 1923, 1,464 in 1924, 2,325 in 1925, and up to July, 1926, 3,269. These figures show a tremendous increase in the production of Clean Milk, and one can look forward with great hope to the future.

The producers of milk are not in business for pleasure or for charity, and if they are to be asked to supply pure milk, the public must demand it and be prepared to buy it.

THE MILK AND DAIRIES (CONSOLIDATION) ACT, 1915, AND ITS ORDER THE MILK AND DAIRIES ORDER, 1926.

Under the Act which came into force on the 1st September, 1925, it is the duty of the County Medical Officer of Health to make enquiries if he is of opinion that Tuberculosis is caused or likely to be caused by the consumption of milk supplied within the County, and take the necessary steps to stop the supply of milk. The County Medical Officer must also investigate any similar complaint made to him by any other Medical Officer of Health.

The Order is made under the Milk and Dairies (Consolidation) Act, 1915, and came into operation on the 1st October, 1926, with certain exceptions including the construction of and water supply to dairies, cooling of milk and conveyance and distribution of milk, which will not come into operation until a later date.

Part III. deals with the registration of cowkeepers, etc.

Part IV. deals with health and inspection of cattle.

Part V. contains general provisions for securing the cleanliness of dairies and for protecting milk against infection and contamination.

Part VI. provides for the proper construction and cleansing of cowsheds, the milking of cows and the cooling of milk.

Part VII. deals with provisions for the construction and cleansing of buildings used for the sale of milk.

Part VIII. makes special provision for the conveyance and distribution of milk, churns, etc.

The County Council is only concerned with Part IV. which deals with the health and inspection of cattle.

It is the duty of the County Council to make provision for the inspection of cattle by Veterinary Inspectors.

The conditions mentioned in the Act and the Order are as follows :—

(1) Any cow which has given Tuberculous milk, or suffering from emaciation due to Tuberculosis or from Tuberculosis of the udder.

(2) Any cow with acute inflammation of the udder.

(3) Acute Mastitis.

(4) Actinomycosis.

(5) Anthrax.

(6) Foot and Mouth Disease.

(7) Suppuration of the Udder.

(8) Any comatose condition.

(9) Any septic condition of the uterus.

(10) Any infection of the udder or teats likely to cause disease.

To the County Council are, therefore, handed over the duties of inspection of cattle previously carried out by the Local Authorities. The problem which now concerns the County Council is as to whether it shall appoint

(1) The veterinary inspectors hitherto employed by Local Authorities.

(2) A full time veterinary inspector or inspectors, or

(3) A full time veterinary inspector together with part-time veterinary inspectors.

It is essential whichever course is adopted that the officers appointed shall have concurrent powers under the Tuberculosis Order of Contagious Diseases of Animals Act, in order that any difference of opinion between two separate officers might be obviated, and that the slaughter of a diseased animal might be arranged immediately.

The whole question is at present being considered by the Public Health Committee.

It would appear to have been better policy to have combined the Tuberculosis Order, 1925, and the Milk and Dairies Order, 1926. rather than to have issued them as separate Orders which are administered by different Committees.

Communications were received under the Milk and Dairies (Consolidation) Act, 1915. from the London County Council in respect of milk from three farms and from the Watford Borough Council in respect of two farms. Veterinary Inspections were made at four of the farms and samples of milk sent for bacteriological examination. Twenty-nine samples in all were taken, but in no case was Tubercle bacilli found ; in the remaining case in which pus cells were reported to have been found in the milk the attention of the farmer was called thereto, and it was found that some of the milk from three cows which were being dried off was accidentally put with the milk consigned, and no further complaint was received.

During the year no routine inspection of cattle was carried out by officers of the County Council. In October, however, the County Council approved of a recommendation of the Public Health Committee appointing the Joint Committee of Kettering Urban and Rural District Councils and the Burton Latimer, Desborough and Rothwell Urban District Councils under the Milk and Dairies Orders, as their agents in the administration of Part IV. of the Milk and Dairies Order of 1926.

The question of appointing certain other Joint Committees and Councils to act similarly as agents for the County Council in their respective areas, together with the whole question of the administration of the Order, is at present under consideration.

VETERINARY INSPECTORS' REPORTS.

The following information has been extracted from the Report of the Veterinary Inspector of the Kettering and District Joint Dairies Committee and from the Reports of Veterinary Inspectors acting on behalf of the Local Authorities under the old Dairies, Cowsheds and Milkshops Orders :—

KETTERING JOINT (DAIRIES) DISTRICT.

291 visits were paid to cowkeepers, and 3,772 inspections of cows were made.

Depending on the sanitary conditions met with, and the health of the cows in milk, the results are classified under three headings, viz., A, B and C.

Class A are those in which the general sanitary conditions have been found to be satisfactory.

Class B, those in which some minor defects have been met with either as regards the sanitary state of the sheds or the health of the animals.

Class C, those in which sanitation is unsatisfactory or bad, or in which cows have been found to be giving milk likely to be harmful to consumers.

The results are as follows :—

Class A	...	156	Sheds containing	2,021	Cows.
Class B	...	129	Sheds containing ...	1,628	Cows.
Class C	...	6	Sheds containing ...	123	Cows.
		291		3,772	

13 cows, belonging to various owners, have been slaughtered owing to their being affected with Tuberculosis within the meaning of the Tuberculosis Order (1915).

WELLINGBOROUGH URBAN AND RURAL DISTRICTS.

Three inspections have been made of the premises in the occupation of the registered cowkeepers, and an individual examination of the dairy cows contained therein, special attention being paid to the udders.

The general sanitary condition of the cowsheds continues to show improvement. Strict supervision has to be exercised over limewashing and manure accumulations. The cleanliness of the floors, and the cows' udders and extremities, in many cases receive insufficient attention. The Milk and Dairies Order, 1926, will probably cause considerable improvement in this direction.

The general condition of the cows throughout the year, with very few exceptions, has continued to be most satisfactory.

The number of cows inspected, the condition of their udders receiving special attention, is 3,469, of which 3,433 or 98·99 per cent. showed no clinical derangement. The udders found to be abnormal, whether from benign or serious affections, numbered 36 or 1·03 per cent., and were in a condition calculated to render the milk harmful for human consumption. Of these, 3, or ·08 per cent. of the total number of cows were affected with tuberculosis, the remainder being cases of either acute or purulent mastitis. The cases of Tuberculosis were reported to the Local Authority and dealt with under the Tuberculosis Order, 1925.

The cowkeepers continue to display willingness to act on suggestions made to them, and to abate the various nuisances when requested.

Below is a tabular statement of the Inspections, etc., for the year, showing the total figures for the whole area " :—

No. of Cowkeepers ...	95	No. of cows inspected	3,469
No. of premises inspected	302	No. of Healthy Udders	3,433 or 98·99 per cent.
Accumulation of manure in too close proximity to cowsheds	—	No. of Abnormal Udders secreting harmful milk	36 or 1·03 per cent.
Keeping swine in cowshed	1		
Neglect of limewashing	—	*Tubercular disease	3 or .08 per cent.

* The number of Tubercular cases is also included in the number of abnormal udders.

FINEDON URBAN DISTRICT.

42 visits were paid to cowkeepers and 531 inspections of cows were made. All the cows were found to be normal clinically with the exception of three which were suffering from acute and purulent mastitis.

RAUNDS URBAN DISTRICT.

55 visits were paid to cowkeepers and 438 inspections of cows were made. All the cows were healthy with the exception of one found to be tuberculous which was slaughtered under the Tuberculosis Order.

RUSHDEN URBAN DISTRICT.

86 visits were paid to cowkeepers and 709 inspections of cows were made. Three cows were reported by the Veterinary Inspector under the Tuberculosis Order as "suspects."

OXENDON RURAL DISTRICT.

The Veterinary Inspector reports that the herds were in good condition generally. One cow was reported as giving Tuberculous milk, but a microscopical test from sample taken by the County Council Inspector proved negative. The owner of the cow was persuaded, however, to use her milk, after boiling, for calves, and the cow will be fed off this year. No figures are given as to the number of cows examined.

THRAPSTON RURAL DISTRICT.

The appointment of Veterinary Inspector was not continued beyond September, 1926. Up to this period two quarterly reports were received in which the Inspector stated that he had paid 114 visits to cowkeepers and made 1,141 inspections of cows. During these inspections he found several cows with Mastitis, Udder Inflammation and blind quarters, and five cows with Tuberculosis ; the latter were slaughtered.

MILK (SPECIAL DESIGNATIONS) ORDER, 1923.

The Ministry of Health, on representations being made to them as to the working of the Milk (Special Designations) Orders, 1922, considered that certain amendments of the Orders were desirable. The issue of the above Order was the outcome, and the old Orders were revoked, as from July 1st, 1923.

The general scheme of grading was not altered, but some relaxation of the conditions in connection with the granting of licences for the sale of "Grade A" milk and "Pasteurised" milk were provided.

The following are the conditions subject to which licences for selling milk as "Certified" may be granted in addition to the general conditions as set out later.

CONDITIONS FOR LICENCES.

"CERTIFIED." PRODUCERS.

(1) Tuberculin test six-monthly.

(2) No animal to be added to herd unless Tuberculin tested.

(3) Reactor or diseased cow to be isolated.

(4) Marking of cows for identification.

(5) All herd to be isolated from other cattle.

(6) Milk to be bottled on farm.

(7) Bottles to be capped.

ALL LICENCE HOLDERS.

1. Milk not to be removed from bottles or seals broken before delivery to the purchaser.

2. Samples shall contain not more than 30,000 B. per c.c. and no B. coli in 1-10th c.c. Milk not to be heated.

"GRADE A (TUBERCULIN TESTED)"

The first five conditions for "Certified" apply.

In addition, milk shall be sent from the producer in a sealed container, with address and containing day of production and time of milking and words "Grade A (Tuberculin Tested)."

It shall be sold to consumer in sealed containers marked "Grade A (Tuberculin Tested)."

It shall contain not more than 200,000 B. per c.c. and no B. coli in 1-100 c.c.

The milk shall not be heated.

"GRADE A." PRODUCERS.

1. No reactor shall be in herd.

2. Cows to be examined three-monthly.

3. Diseased cows to be isolated.

4. If Tubercle bacillus is found in milk, producer shall ascertain diseased animals and remove from herd.

5. Cows to be marked and registered.

6. Cows in milk belonging to herd shall be kept separate from all other cows in milk.

7. Milk if not bottled to be sent in sealed containers labelled.

PURVEYORS.

1. Milk to be sold in bottles with sealed caps.

ALL LICENCE HOLDERS.

1. Milk shall not be heated.

2. Milk to contain not more than 200,000 B. per c.c. and no B. coli in 1-100th c.c.

3. Grade A Pasteurised to contain not more than 30,000 B. per c.c. and no B. coli in 1-10th c.c.

" PASTEURISED."

1. Milk to be heated to 145° half-an-hour and cooled immediately to 55° or under.

2. Milk heated only once.

3. Plant to satisfy Licensing Authority.

4. Bottles to be labelled " Pasteurised."

5. Milk to contain not more than 100,000 B. per c.c.

Conditions are relaxed so as to remove test for Coliform B, and to provide that bacteria does not exceed 100,000 per c.c.

General Conditions subject to which Licences may be granted.

(1) The arrangements and processes under and by which the milk is produced, stored, treated and distributed, as the case may be, shall be such as to satisfy the licensing authority that the conditions subject to which the licence is granted are being and will be complied with.

(2) The holder of the licence shall

(a) take such measures as the licensing authority may require to ensure that the milk in respect of which the use of a special designation is authorised shall be kept separate at all stages from all other milk ;

(b) keep accurate records of the quantities of milk produced, purchased and sold, as the case may be, and of the names and addresses of the persons from whom the milk was purchased and to whom it was sold otherwise than by retail ;

(c) permit any person duly authorised by the licensing authority

(i.) to inspect the processes of production, storage and treatment ;

(ii.) to take samples of the milk free of charge, and

(iii.) to inspect any records which the holder is required by the conditions of the licence to keep.

Article 4 has certain alterations from Article 4 of the 1922 Order, and reads as follows :—

" Subject to the provisions of this Order, and without " prejudice to the power to grant licences conferred on the " Minister by Section 3 (1) of the Milk and Dairies (Amend- " ment) Act, 1922, every County Council and County Borough " Council is hereby authorised to grant licences to producers " to sell milk as " Grade A " and every District Council is " hereby authorised to grant licences to any person to sell " milk as " Pasteurised " and to any person to sell milk as " " Certified," " Grade A (Tuberculin Tested)", or " Grade " A," otherwise than from the establishment at which the " milk is produced : Provided that in any case in which the " Minister is satisfied that a County Council are unwilling or " do not propose to exercise in any District the power of " granting licences hereby conferred on them, the Minister " may authorise the District Council to grant such licences " in place of the County Council."

Similarly, Article 6 (2) differs in a slight degree from Article 6 (2) of the 1922 Order, and reads :—

"Before granting a licence to a producer the licensing "authority shall require him in the case of "Certified" "milk or "Grade A (Tuberculin Tested)" milk to produce "a veterinary surgeon's certificate showing the results of an "examination of the herd carried out not more than three "months before the date of the application and a certificate "of a prescribed tuberculin test of the herd carried out "within a similar period, and in the case of "Grade A" "milk to produce a veterinary surgeon's certificate showing "the results of an examination of the milch cows belonging "to the herd carried out not more than one month before "the date of the application."

Article 12 extends Article 12 of the 1922 Order and now reads as follows :—"A licence permitting a producer to sell "milk produced by him as "Certified" shall entitle him "to sell such milk as "Grade A (Tuberculin Tested)" or as ""Grade A," and a licence permitting the producer to sell "milk produced by him as "Grade A (Tuberculin Tested)" "shall entitle him to sell such milk as "Grade A."

As mentioned above, the County Council is the Authority for the issuing of licences to producers of Grade A milk. It is to be regretted that in a large milk producing County like Northamptonshire not one application was made during the year by a producer to sell milk as Grade A. In the County, there were only three applications granted by the Ministry of Health to producers to sell Grade A (Tuberculin tested) milk.

SALE OF FOOD AND DRUGS ACTS.

ANNUAL REPORT OF COUNTY ANALYST FOR YEAR ENDING DECEMBER 31ST, 1926.

During the year 1926, 434 samples were submitted for analysis. The list of samples is as follows :—

Milk	354
Skimmed and Separated Milk	15
Cream	2

Butter	20
Margarine	1
Lard	2
Apples	23
Cocoa	1
Coffee	1
Self-raising Flour	1
Whisky	1
Brandy	2
Malt Vinegar	3
Pepper	2
Mustard	1
Tartaric Acid	1
Bi-carbonate of Soda	1
Baking Powder	2
Borax	1
	434

MILK.—Three hundred and fifty-four samples, including seven "appeal to cow" samples have been analysed, and, of these, thirty-six were unsatisfactory, the proportion of adulterated samples showing a marked increase over the number reported against in 1925.

Twenty-seven of the thirty-six unsatisfactory samples were deficient in fat, and in three cases the samples were watered in addition.

The deficiency in fat occurred for the most part at the time of the usual demand for cream for consumption with fruit.

The average percentage of Fat in all the samples examined—including those reported as adulterated and deficient in fat—gave the figure of 3·6 per cent. as compared with the minimum of 3 per cent. required by the Regulations.

During the first Quarter the average percentages of Fat from the two Divisions (Northern and Southern) of the

County were, respectively, 3·61 and 3·8; in the second Quarter, 3·13 and 3·38; in the third Quarter, 3·44 and 3·68, and in the fourth Quarter 3·78 and 4·0.

In the case of a sample which I had reported as a watered milk deficient in fat, the vendor, at the hearing of the proceedings taken against him, put forward, in defence, an analysis of what purported to be the portion of the sample handed to him by the Inspector, and to be one of the three parts into which the sample had been divided. The results of this analysis were entirely at variance with those shown in my certificate, but the analyst who reported on the sample stated that the cork of the bottle blew out owing to the pressure of gas formed by the decomposition of the milk, and that some of the contents of the bottle were lost, so that the results of his analysis could not be relied on. Under such circumstances a certificate impugning the correctness of my original analysis should not have been given.

The case, however, was adjourned, and the reserved portion of the original sample was submitted to the Government Laboratory. The analysis of the Principal Government Chemist absolutely confirmed my results, showing that the sample taken by the Inspector was watered and deficient in fat. The fact that two of the three portions into which the sample was divided were identical in composition proved that the analysis put in for the defence could not have been that of the milk on which the prosecution was based.

Two samples sold as "Separated Milk" and "Skimmed Milk" contained 2·6 and 2·9 per cent. of fat respectively.

CREAM.—The two samples of cream were genuine and free from preservatives. They contained 53 and 61 per cent. of fat respectively.

BUTTER.—Of the twenty samples of Butter, eleven contained Boracic Preservatives in amounts varying from ·1 to nearly ·4 per cent. of Borac Acid, and in nine cases the amount of moisture was nearly up to the maximum permitted.

The Margarine contained Boracic Preservative equal to ·31 per cent. Boric Acid.

A considerable number of samples of Apples imported from America were examined for Arsenical Contamination arising from the spraying of the fruit with Arsenical preparations to kill the destructive Codlin Moth. In only one case, however, out of the twenty-three separate lots examined, was Arsenic present in more than quite insignificant quantity. This specimen contained one-sixtieth of a grain per lb., a quantity which, though in excess of the limit—one-hundredth of a grain—laid down by the Commission on Arsenical poisoning, was, in view of the fact that the Arsenical Contamination was practically confined to the outside of the fruit, not of very serious importance.

The samples of Drugs, Baking Powders, Condiments, etc., were satisfactory, and the three samples of Spirits were of correct alcoholic strength.

REPORT ON THE WORK OF THE INSPECTORS OF FOOD AND DRUGS FOR THE YEAR ENDING DECEMBER 31ST, 1926.

During the year, 417 samples were procured for analysis, 349 being of milk, of which 14 were informal samples (two were broken in transit). In addition, there were 7 "Appeal to the Cow" samples taken.

Of the thirty-six samples of milk adversely reported on ten contained added water—three of these were also deficient in fat, two were deficient in solids-not-fat and twenty-four contained less than the minimum standard of fat.

Fifteen of the samples which were deficient in fat were taken during the months of May and June when fat contents are usually low and in some instances during that period, the producers, owing to transport difficulties were unable to obtain their supplies of cattle cake.

Considerable local interest was aroused in the prosecution of a vendor for selling milk containing 14 per cent. of added water. At the hearing of the case the defence produced a certificate of analysis by a public analyst alleged to be in respect of the portion of the sample left with the vendor and pleaded for a dismissal in view of the conflicting evidence of the analysts. The certificate was objected to on the grounds (1) Failure to furnish the prosecutor with a copy of the certificate three days previous to the hearing of the case and (2) the certificate appeared not to be a report of the analysis of the portion of the sample left with the defendant and on which the proceedings were based inasmuch as no mention was made in the certificate of the seal placed on the bottle before it was handed to the seller. The case was adjourned for the first objection to be overcome and for the third portion of the sample to be submitted to the Government Chemist for analysis.

The report on this portion of the sample agreed in every particular with that of the Public Analyst for the County. At the adjourned hearing a fine of £10 and £3 3s. costs was imposed.

Six months later the defendant was again prosecuted for selling milk containing 20 per cent. of added water and fined £25.

A complaint was received from an officer of a neighbouring authority as to the quality of milk consigned from a producer in this County. As there were difficulties in the way of taking samples in the manner prescribed by the Act two informal samples were taken which were found to contain 12 per cent. and 14 per cent. respectively of added water. Some little time passed before formal samples could be procured and it was then found what appeared to be persistent adulteration on the part of the consignor, as the reports on these samples were similar to those of the informal ones. The producer in this case was fined £2 10s. in each case in respect of the two formal samples.

A sample of milk taken from a retailer was reported by the analyst as containing 8 per cent. of added water, and a further informal sample showed added water to the extent of 6 per cent. " An appeal to the Cow " was made. The report of the analyst on the sample then taken suggested and afterwards proved to be adulteration at the source, for a formal sample subsequently taken contained 9 per cent. of added water. The producer was prosecuted and fined £3.

Having regard to the previous good character of another vendor, who was prosecuted for selling milk with 15 per cent. of added water, the case was dismissed on the payment of costs.

Proceedings are not taken in cases of deficiencies of fat in milk unless there are grounds to believe the milk is not as it comes from the cow. There were, however, two cases before the courts. A sample of milk found to be 11 per cent. deficient in fat was followed up by an " Appeal to the Cow," the evidence showed addition of separated milk and the seller was fined £1.

The other case where the deficiency of 14 per cent. of fat was caused through failure to keep the milk stirred when in course of delivery was dismissed on payment of costs.

Of the twelve samples of Apples submitted for analysis to ascertain the amount of Arsenical Contamination due to spraying, three showed traces of Arsenic but the quantity present did not amount to a dangerous contamination.

Tables showing the number of samples taken for analysis during the year 1926 :—

Sample	Number	Genuine	Adulterated	Remarks	Result of Proceedings.
t Quarter—					
Milk	69*	65	2	17 per cent. deficient in fat. 15 per cent. deficient in fat. * Two bottles were broken in transit and contents lost.	Vendors warned and further samples taken.
nd Quarter—					
Milk	108	87	21	12 per cent. added water — Informal samples.	
				14 ,, ,,	
				12 ,, ,, — Taken in connection with above.	Producer fined £2 10s.
				14 ,, ,,	Producer fined £2 10s.
				15 ,, ,,	Case dismissed on payment of 4s. costs.
				14 per cent. added water.	Vendor fined £10 and £3 3s. costs.
				18 per cent. deficient in fat. Three further informal samples taken at time of milking showed 3·3 per cent. of fat.	
				30 per cent. deficient in fat.	
				33 per cent. deficient in fat.	
				24 per cent. deficient in fat. A following up sample from vendor showed 11 per cent. deficiency of fat, An "Appeal to the Cow" followed, the samples then taken were of very poor quality.	
				27 20 20 17 16 15 14 14 8 6 — Per cent. deficient in fat. Twelve further samples were taken from producers at actual time of milking and were nearly all very low in fat content. Considerable difficulty was experienced at this period in obtaining cattle cake in consequence of Transport difficulties. In no instance was adulteration suggested by the facts.	

Sample	Number	Genuine	Adulterated	Remarks.	Result of Proceedings.
3rd Quarter—					
Milk	89	82	7	8 per cent. added water.	
				6 per cent. added water. An Informal sample taken in connection with above.	
				9 per cent. added water, taken in connection with above after an "Appeal to the Cow."	Producer fined £3.
				20 per cent. deficient in fat. An "Appeal to the Cow" followed. The sample then taken was of poor quality.	
				11 per cent. deficient in fat. An "Appeal to the Cow" followed. The evidence showed addition of separated milk. Proceedings taken.	Fine £1.
				7 per cent. deficient in fat. Vendor warned and a further sample taken.	
				5 per cent. deficient in fat. Vendor warned and a further sample taken.	
4th Quarter—					
Milk	83	77	6	20 per cent. added water. An "Appeal to the Cow" followed.	Fine £25.
				Deficient in solids not fat.	
				Deficient in solids not fat; taken in connection with above and at time of milking.	
				14 per cent. deficient in fat. Vendor warned for insufficient stirring during delivery.	
				13 per cent. deficient in fat. Proceedings taken against Vendor for failing to keep the milk stirred when on the round.	Case dismissed on payment of 4s. costs.
				7 per cent. deficient in fat. Observations are being kept and further samples will be taken.	

Sample	Number	Genuine	Adulterated	Remarks.
pples	12	12	...	These samples were of kinds known as "Jonathan" and "Newtown" of American origin and were taken informally. Three samples showed distinct signs of Arsenical Contamination but the quantities present were not dangerous.
kimmed and Separated Milk	15	15	...	
ream	2	2	...	
hisky	1	1	...	
randy	2	2	...	
ocoa	1	1	...	
offee	1	1	...	
elf-Raising Flour	1	1	...	
aking Powder	2	2	...	
epper	2	2	...	
alt Vinegar	2	2	...	
utter	20	20	...	
ard	2	2	...	
argarine	1	1	...	
artaric Acid	1	1	...	
i-carbonate of Soda	1	1	...	
orax	1	1	...	
ustard	1	1	...	

THE PUBLIC HEALTH (PRESERVATIVES, &c., IN FOOD) REGULATIONS, 1925.

The above Regulations, made by the Minister of Health, commenced to operate on January 1st, 1927, when the use of preservatives in certain foods was either forbidden or restricted. The Regulations specify the articles of food which may contain preservative and the nature and proportion permitted.

Prior to these Regulations coming into operation the question of preservatives was largely bound up with Boric Acid, Formaldehyde and Salicylic Acid.

Formaldehyde—used for the preservation of meat, and Boric Acid were often used for concealing incipient putrefaction and for hiding any smell of staleness and decomposition. Many articles contained Boric Acid, and although the boric present in any one article may not have been excessive, the amount taken in different foods would be by no means small.

Since 1912 preservatives have not been permitted in Milk ; Cream, however, may continue to be preserved with a stated amount of Boric Acid until January 1st, 1928, when the Public Health (Milk and Cream) Regulations, 1912, and the Public Health (Milk and Cream) Regulations 1912, Amendment Order, 1917, as relate to Cream will be revoked and superseded by these Regulations.

Bacon, Ham and Egg-yolk may not contain any preservative after July 1st, 1927.

The only preservatives permitted will be Sulphur Dioxide and Benzoic Acid, and Sausages, Sausage Meat, Coffee Extract, Pickles, and Sauces containing preservative must bear a label to that effect.

The proportion of preservative permitted varies according to the nature of the article of food from 40 parts per million in Jam and certain Fruit Jellies—but not including Marmalade made from citrous fruits—to 2,000 parts per million in fruit and fruit pulp (not dried) and certain kinds of dried fruit.

Copper Sulphate, hitherto used to supplant the green colour in tinned vegetables, is not permitted, and it will be contrary to the Regulations to use any of the colouring matters specified in Part II. of the First Schedule to the Regulations.

BRITISH MUSEUM
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Table XIV.

CAUSES OF DEATH IN ADMINISTRATIVE AREAS, 1926.

URBAN DISTRICTS.

CAUSES OF DEATH.	Kettering U.D.		Brackley M.B.		Daventry M.B.		Desborough U.D.		Finedon U.D.		Higham Ferrers M.B.		Irthlingborough U.D.		Oundle U.D.		Raunds U.D.		Rothwell U.D.		Rushden U.D.		Wellingboro' U.D.		Burton Latimer U.D.		Total U.D's.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
All Causes	142	161	9	18	32	17	27	18	13	23	11	12	17	25	11	11	24	26	29	27	77	54	107	133	20	19	519	544
1 Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...
4 Scarlet Fever	1	3	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	3
5 Whooping Cough	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	2
6 Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 Influenza	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	6	3	...	...	8	6
8 Encephalitis lethargica ...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2	4
9 Meningococcal meningitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 Tuberculosis of respiratory system	9	16	...	...	...	...	2	4	1	1	1	1	2	3	1	...	...	1	2	2	8	1	16	8	1	...	43	37
11 Other tuberculous diseases ...	2	3	...	1	...	...	...	...	1	1	...	...	...	1	...	1	...	...	...	...	...	3	2	...	...	1	5	11
12 Cancer, malignant disease ...	19	21	1	2	4	1	4	3	...	3	5	2	2	4	...	6	2	4	2	3	12	11	11	16	2	2	64	78
13 Rheumatic fever	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	2
14 Diabetes	2	2	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	1	1	...	...	4	6
15 Cerebral hæmorrhage, &c. ...	7	16	2	1	5	1	3	3	1	2	1	1	...	...	1	...	2	1	1	...	5	4	4	8	2	2	34	39
16 Heart Disease	18	29	...	...	6	3	4	4	2	4	...	3	2	5	...	2	6	4	8	4	8	10	16	39	5	1	75	108
17 Arterio-sclerosis	5	5	1	1	3	1	1	...	2	1	...	1	3	...	...	...	1	...	...	2	4	1	3	5	1	2	24	19
18 Bronchitis	6	8	1	3	1	1	2	...	1	1	...	1	3	1	...	...	...	2	3	4	1	3	7	4	1	1	26	29
19 Pneumonia (all forms) ...	16	9	1	1	2	1	...	...	1	3	...	...	...	1	...	...	...	...	1	2	10	4	3	7	...	1	34	29
20 Other respiratory diseases ...	1	2	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	2	1	...	...	...	...	4	5
21 Ulcer of stomach or duodenum	1	1	...	...	1	...	2	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	...	1	1	...	8	3
22 Diarrhœa, &c. (under 2 years)	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	2	2
23 Appendicitis and typhlitis ...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	5	1
24 Cirrhosis of liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...
25 Acute and chronic nephritis ...	3	1	...	1	...	1	1	...	1	...	...	...	1	2	...	1	...	1	...	...	1	...	3	3	...	1	10	11
26 Puerperal sepsis	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2
27 Other accidents and diseases of pregnancy and parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	3
28 Congenital debility and malformation, premature birth	9	7	...	1	1	2	4	2	...	...	2	1	1	1	1	...	2	...	...	...	5	...	6	7	1	2	32	23
29 Suicide	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	1	3	...	3	1	...	...	11	3
30 Other deaths from violence ...	6	4	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	1	1	2	3	3	3	2	...	15	13
31 Other defined diseases ...	30	29	3	5	8	5	2	...	2	6	...	...	3	4	5	1	7	10	8	5	9	10	20	23	2	4	99	102
32 Causes ill-defined or unknown	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	3	...	...	1	...	1	5	3
Special Causes (included above) Poliomyelitis	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths of Infants under 1 year: Total ...	19	14	...	2	3	2	4	3	1	2	2	1	1	2	1	...	2	...	2	...	6	...	10	8	2	2	53	36
Deaths of Infants under 1 year: Illegitimate ...	1	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Total Births	265	248	12	18	35	26	35	33	46	40	18	19	35	33	15	12	23	32	36	37	120	88	184	145	20	19	844	750
Legitimate	255	236	12	17	33	26	33	32	42	38	17	19	34	32	14	10	23	30	35	35	116	83	178	138	19	19	811	715
Illegitimate	10	12	...	1	2	...	2	1	4	2	1	...	1	1	1	2	...	2	1	2	4	5	6	7	1	...	33	35
Population	30,580		2,198		3,196		4,385		4,099		3,091		4,983		2,600		3,753		4,711		13,520		20,360		3,524		101,300	

RURAL DISTRICTS.

CAUSES OF DEATH.	Brackley R.D.		Brixworth R.D.		Crick R.D.		Daventry R.D.		Easton-on-the Hill R.D.		Gretton R.D.		Hardingstone R.D.		Kettering R.D.		Middleton Cheney R.D.		Northampton R.D.		Oundle R.D. (part of)		Oxendon R.D.		Potterspury R.D.		Thrapston R.D. (part of)		Towcester R.D.		Wellingboro' R.D.		Total R.D's.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
All Causes	39	42	52	75	25	20	91	71	10	9	13	8	43	46	57	52	17	16	50	45	38	45	32	33	25	27	70	61	54	62	73	72	689	684
1 Enteric Fever	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
2 Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
4 Scarlet Fever	...	...	1	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
5 Whooping Cough	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...	1	...	6
6 Diphtheria	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3
7 Influenza	1	2	2	3	1	...	5	...	...	...	1	...	...	1	...	...	...	...	...	2	...	1	...	1	...	1	...	...	1	1	...	...	11	12
8 Encephalitis lethargica ...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	3
9 Meningococcal meningitis ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
10 Tuberculosis of respiratory system	1	1	2	6	...	...	2	3	...	...	1	...	2	1	1	1	1	...	2	3	...	1	1	2	3	...	4	2	3	1	5	7	28	28
11 Other tuberculous diseases ...	...	...	1	...	...	...	1	1	1	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...	1	...	1	1	...	1	...	7	5
12 Cancer, malignant disease ...	6	4	9	12	3	4	17	11	1	2	...	5	6	7	9	6	3	1	3	4	10	4	4	6	7	2	10	9	6	11	9	9	103	97
13 Rheumatic fever	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...	3	2
14 Diabetes	...	...	...	...	1	...	1	1	...	...	...	...	...	...	1	...	...	1	1	1	1	...	...	...	...	...	1	...	...	...	...	...	6	3
15 Cerebral hæmorrhage, &c. ...	4	6	3	6	...	1	4	4	1	...	2	1	1	3	3	3	3	1	3	3	1	2	5	5	2	3	3	6	7	4	10	8	52	56
16 Heart Disease	8	11	7	6	3	2	10	7	2	2	2	...	7	9	8	7	...	3	12	5	5	9	4	8	...	3	8	14	7	11	14	13	97	110
17 Arterio-sclerosis	...	...	1	2	1	...	4	...	3	2	1	...	3	2	3	2	...	1	2	...	1	...	2	...	1	...	1	...	1	...	1	2	25	11
18 Bronchitis	5	2	2	5	1	2	5	9	...	...	1	...	4	3	4	4	1	2	3	3	2	7	3	3	3	2	1	6	1	...	6	8	42	56
19 Pneumonia (all forms) ...	1	2	3	2	1	...	6	4	...	...	...	...	1	6	6	2	1	...	5	3	3	1	3	...	1	...	4	1	4	4	2	...	41	25
20 Other respiratory diseases ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	1	2	...	1	4	...	8	4
21 Ulcer of stomach or duodenum	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	1
22 Diarrhœa, &c. (under 2 years)	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2	3
23 Appendicitis and typhlitis ...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	1	...	1	...	...	...	...	1	1	...	...	...	...	...	6	3
24 Cirrhosis of liver	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	2
25 Acute and chronic nephritis ...	1	...	...	1	3	...	5	5	...	...	...	1	2	...	3	2	...	1	3	...	...	...	...	...	...	...	7	...	2	2	...	2	26	14
26 Puerperal sepsis	...	...	...	2	...	...	...	1	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	7
27 Other accidents and diseases of pregnancy and parturition	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4
28 Congenital debility and malformation, premature birth	...	...	1	5	3	...	1	...	...	1	...	1	...	2	2	1	1	2	3	3	...	...	1	1	1	1	3	...	1	2	5	2	22	21
29 Suicide	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	1	...	1	...	2	...	...	...	2	1	11	1
30 Other deaths from violence ...	2	1	2	4	2	...	2	...	...	...	...	...	3	1	1	2	...	1	1	2	...	1	...	1	1	...	3	...	2	1	2	2	21	16
31 Other defined diseases ...	7	12	13	18	6	10	23	18	2	2	3	...	12	7	11	16	6	3	7	11	12	16	8	5	5	12	17	18	18	20	11	14	161	182
32 Causes ill-defined or unknown	...	...	1	1	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	3	...	...	1	...	...	6	4
Special Causes (included above) Poliomyelitis	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths of Infants under 1 year: Total ...	2	1	2	9	5	...	2	...	...	2	...	1	...	5	5	2	1	2	7	8	2	2	2	2	2	3	4	2	2	3	6	4	42	46
Deaths of Infants under 1 year: Illegitimate ...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...	1	...	1	2	...	...	5	4
Total Births	58	37	96	102	24	17	119	95	22	10	11	13	60	71	81	81	20	22	85	72	51	46	29	20	40	34	76	6	78	74	99	96	949	850
Legitimate	54	36	91	97	23	16	114	94	22	10	10	11	55	68	78	79	17	22	82	71	48	43	28	18	39	34	70	60	69	68	92	92	892	819
Illegitimate	4	1	5	5	1	1	5	1	...	...	1	2	5	3	3	2	3	...	3	1	3	3	1	2	1	...	6	...	9	6	7	4	57	31
Population	6,524		11,800		2,408		13,850		1,497		1,388		7,442		9,421		2,342		8,151		6,505		3,902		4,780		10,350		9,870		12,670		112,900	

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TABLE XV.

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF NORTHAMPTON, 1926.

CAUSES OF DEATH.	Sex.	AGGREGATE OF URBAN DISTRICTS.										AGGREGATE OF RURAL DISTRICTS.									
		All Ages	0—	1—	2—	5—	15—	25—	45—	65—	75—	All Ages	0—	1—	2—	5—	15—	25—	45—	65—	75—
ALL CAUSES	M	519	53	11	5	11	27	53	138	118	107	689	42	8	11	14	20	51	149	174	220
	F	514	36	6	11	15	31	57	122	116	117	684	46	5	8	12	20	52	135	141	265
1 Enteric Fever	M	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
2 Small-pox	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Measles	M	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
4 Scarlet Fever	M	2	...	1	...	1	...	...	...	...	...	2	...	...	1	1	...	...	...	...	...
	F	3	...	...	...	1	2	...	...	...	...	2	...	...	1	1	...	...	...	...	...
5 Whooping Cough......	M	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	2	1	1	...	...	...	...	...	...	...	6	3	2	...	...	...	...	...	...	1
6 Diphtheria	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	3	...	...	1	1	...	...	1	...	...
7 Influenza	M	8	...	...	...	1	1	1	3	2	...	11	...	1	...	...	...	3	1	3	3
	F	6	...	...	1	...	1	...	1	1	2	12	3	...	...	...	...	1	1	4	3
8 Encephalitis lethargica	M	2	...	...	...	1	...	...	1	...	...	2	...	...	1	1	...	...	...	...	...
	F	4	...	...	...	1	...	2	1	...	...	3	...	...	...	1	...	2	...	...	...
9 Meningococcal meningitis	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
10 Tuberculosis of ...... respiratory system	M	43	...	...	...	1	12	21	1	2	...	28	...	...	...	1	8	12	6	1	...
	F	37	...	...	...	2	15	16	3	1	...	28	...	...	...	...	9	10	9	...	...
11 Other Tuberculous Diseases	M	5	1	...	2	...	...	1	1	...	...	7	...	...	...	1	5	1	...	...	...
	F	11	2	1	1	1	3	2	1	...	...	5	...	...	...	1	1	2	...	1	...
12 Cancer, Malignant Disease	M	64	...	...	...	1	1	2	36	17	7	103	...	...	...	...	...	4	34	45	20
	F	78	...	...	...	...	...	10	31	21	16	97	...	...	...	...	...	9	41	25	22
13 Rheumatic Fever ...	M	2	...	...	...	1	...	1	...	...	...	3	...	...	1	1	1	...	...	...	...
	F	2	...	...	...	1	...	1	...	...	...	2	...	...	...	...	1	...	...	1	...
14 Diabetes	M	4	...	...	...	...	...	...	2	2	...	6	...	...	...	...	...	...	3	3	...
	F	6	...	...	...	...	...	1	3	1	1	3	...	...	...	...	...	...	2	1	...
15 Cerebral Hæmorrhage, &c.	M	34	...	...	...	...	...	...	9	17	8	52	...	...	...	...	...	...	14	15	23
	F	39	...	...	...	...	...	...	15	8	16	56	...	...	...	...	...	...	12	22	22
16 Heart Disease	M	75	...	...	...	4	2	4	19	24	22	97	...	...	...	...	2	4	27	34	30
	F	108	...	...	...	...	3	3	32	39	31	110	...	...	...	3	1	4	27	40	35
17 Arterio-sclerosis	M	24	...	...	...	...	...	1	2	10	11	25	...	...	...	...	...	1	1	9	14
	F	19	...	...	...	...	...	...	5	7	7	11	...	...	...	...	...	...	...	5	6
18 Bronchitis...............	M	26	2	...	...	...	...	...	4	6	14	42	1	...	...	...	...	...	...	10	31
	F	29	1	1	...	...	...	1	...	8	18	56	2	...	1	...	...	...	2	14	37
19 Pneumonia (all forms)	M	34	7	1	1	1	...	4	11	6	3	41	6	2	4	...	1	6	10	5	7
	F	29	7	1	3	1	2	1	7	3	4	25	2	...	3	...	...	3	4	3	10
20 Other Respiratory Diseases	M	4	1	...	...	...	...	...	2	...	1	8	1	1	1	...	...	...	2	1	2
	F	5	...	...	1	...	...	...	1	3	...	4	...	...	...	...	...	...	1	...	3
21 Ulcer of Stomach or Duodenum	M	8	...	...	...	...	...	4	3	1	...	3	...	...	...	...	...	...	3	...	...
	F	3	...	...	...	...	...	2	1	...	...	1	...	...	...	...	...	...	1	...	...
22 Diarrhœa, &c.	M	4	2	...	...	...	...	2	...	...	...	6	2	...	...	...	...	...	1	1	2
	F	3	1	1	...	...	1	...	...	...	...	4	3	...	...	...	...	...	1	...	...
23 Appendicitis and Typhlitis	M	5	...	...	...	...	1	...	3	...	1	6	...	...	...	1	...	...	5	...	...
	F	1	...	...	...	1	...	...	...	...	...	3	...	1	...	2	...	...	...	...	...
24 Cirrhosis of Liver ...	M	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...
	F	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
25 Acute and Chronic Nephritis	M	10	...	...	...	...	1	1	4	1	3	26	...	1	1	...	...	1	5	10	8
	F	11	...	...	...	...	...	4	2	3	2	11	...	...	...	...	1	1	5	3	4
26 Puerperal Sepsis ...	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	2	...	...	...	...	...	2	...	...	...	7	...	...	...	...	2	5	...	...	...
27 Other Accidents and Diseases of Pregnancy & Parturition	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	3	...	...	...	...	1	2	...	...	...	4	...	...	...	...	1	3	...	...	...
28 Congenital Debility and Malformation, premature birth	M	32	31	1	...	...	...	...	...	...	...	22	22	...	...	...	...	...	...	...	...
	F	23	20	1	1	1	...	...	...	...	...	21	21	...	...	...	...	...	...	...	...
29 Suicide	M	11	...	...	...	...	1	4	3	3	...	11	...	...	...	...	...	2	6	2	1
	F	3	...	...	...	...	1	...	2	...	...	1	...	...	...	...	...	...	1	...	...
30 Other Deaths from Violence	M	15	...	...	...	...	2	4	2	3	4	21	1	...	1	3	2	7	4	2	1
	F	13	...	...	...	1	1	1	1	...	9	16	1	1	...	...	1	1	2	...	10
31 Other defined Diseases	M	97	6	...	2	3	6	3	21	23	33	157	8	2	1	5	1	7	24	31	78
	F	101	4	...	4	5	4	9	13	21	41	181	11	1	2	2	3	9	21	20	112
32 Causes Ill-defined or unknown	M	5	...	...	...	...	...	...	4	1	...	6	...	1	...	...	...	1	3	1	...
	F	3	...	...	...	...	...	...	3	...	...	4	...	...	...	...	...	1	3	...	...

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FACTORY AND WORKSHOP ACT, 1901.

DISTRICTS.	Number of Inspections.			Nuisances under the Public Health Acts, including those specified in Sections 2, 3, 7, and 8 of the Factory & Workshop Act, 1901, as remediable under the Public Health Acts.								Offences under the Factory and Workshop Acts.	
									Sanitary Accommodation.				
	Factories (including Factory Laundries.)	Workshops (including Workshop Laundries.)	Workplaces (other than Out-workers' premises.)	Want of Cleanliness.	Want of Ventilation.	Over-crowding.	Want of Drainage of Floors.	Other Nuisances.	In-sufficient.	Unsuitable or Defective.	Not separate for sexes.	Illegal Occupation of Underground Bakehouse (S. 101.)	Other offences (excluding offences relating to out-work and offences under Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops, Transfer of Powers) Order, 1921).
URBAN :—													
BRACKLEY (Borough)	(*a*) 11	...	...	...	...	...	...	...	...	...	...	...	...
DAVENTRY (Borough)	32	83	5	...	...	...	...	...	...	2	...	...	...
HIGHAM FERRERS (Borough) ...	(*b*) 37	...	...	...	...	...	...	...	2	5	...	...	...
BURTON LATIMER	...	18	...	3	...	...	...	4	...	...	...	...	...
DESBOROUGH	24	12	...	...	...	...	...	...	...	...	...	...	...
*FINEDON	...	...	...	...	...	...	...	...	...	...	...	...	...
IRTHLINGBOROUGH	55	19	7	13	...	...	1	7	1	10	...	...	...
KETTERING	44	92	...	14	...	...	...	2	...	13	...	...	4
*OUNDLE	...	...	...	...	...	...	...	...	...	...	...	...	...
RAUNDS	39	32	18	...	...	...	...	1	...	1	...	...	...
*ROTHWELL	...	...	...	...	...	...	...	...	...	...	...	...	...
*RUSHDEN	...	...	...	...	...	...	...	...	...	...	...	...	...
*WELLINGBOROUGH	...	...	...	...	...	...	...	...	...	...	...	...	...
Combined URBAN DISTRICTS ...	**245**	**256**	**30**	**30**	...	...	**1**	**14**	**3**	**31**	...	...	**4**
RURAL :—													
BRACKLEY	(*c*) 6	...	...	...	...	...	...	...	...	...	...	...	...
*BRIXWORTH	...	...	...	...	...	...	...	...	...	...	...	...	...
CRICK	...	19	...	12	...	...	...	...	...	1	...	...	...
DAVENTRY	6	24	89	4	3	...	...	...	...	1	...	...	...
*EASTON-ON-THE-HILL	...	...	...	...	...	...	...	...	...	...	...	...	...
GRETTON	4	9	...	...	...	...	...	...	...	...	...	...	...
*HARDINGSTONE	...	...	...	...	...	...	...	...	...	...	...	...	...
*KETTERING	...	...	...	...	...	...	...	...	...	...	...	...	...
MIDDLETON CHENEY	Nil	...	...	...	...	...	...	...	...	...	...	...	...
NORTHAMPTON	6	3	...	...	...	...	...	...	...	...	...	...	...
*OUNDLE	...	...	...	...	...	...	...	...	...	...	...	...	...
*OXENDON	...	...	...	...	...	...	...	...	...	...	...	...	...
POTTERSPURY	3	3	...	...	...	...	...	...	...	...	...	...	...
THRAPSTON	77	30	...	22	...	...	...	2	...	...	...	...	...
TOWCESTER	...	35	...	5	...	...	...	...	...	...	...	...	...
*WELLINGBOROUGH	...	...	...	...	...	...	...	...	...	...	...	...	...
Combined RURAL DISTRICTS ...	**102**	**123**	**89**	**43**	**3**	...	...	**2**	...	**2**	...	...	...
ADMINISTRATIVE COUNTY ...	**347**	**379**	**119**	**73**	**3**	...	**1**	**16**	**3**	**33**	...	...	4

INSPECTIONS.

In respect of Factories, two written notices were issued in Daventry Borough, thirteen at Irthlingborough, one at Raunds, and nineteen in Thrapston Rural District.

In respect of Workshops, seven written notices were issued at Irthlingborough, thirteen in Crick Rural District, two in Daventry Rural District, and five in Thrapston Rural District.

In respect of Workplaces, one written notice was issued at Raunds and six in Daventry Rural District.

The whole of the defects as enumerated above were remedied.

(*a*) Includes inspections of Workshops and Workplaces.

(*b*) Includes inspections of Workshops, Workplaces and Out-Workers' Premises.

(*c*) Includes Inspections of Workshops.

* No Table, or detailed information, received from these Districts.

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